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AUGUST, 1951

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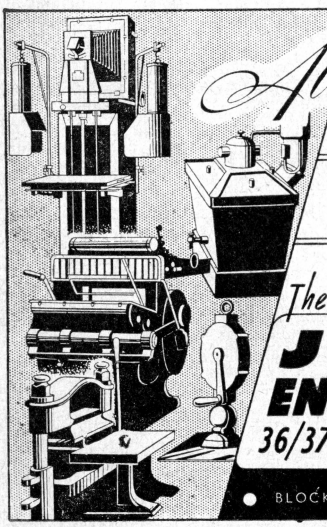

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TRAINS ILLUSTRATED

Vol. IV, No. 8 AUGUST, 1951

Editor:
G. FREEMAN ALLEN
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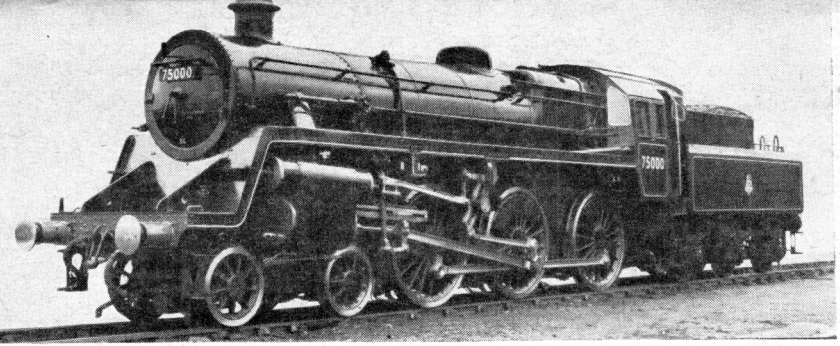
Front Cover: STRANGERS AT CLAPHAM—New class "4MT" 4-6-0 No 75000, hauling an ex-Caledonian twelve-wheeler and the Fell Diesel mechanical 4-8-4 No. 10100 through Clapham Junction to Eastbourne for exhibition there (1/6/51). (See also pp. 254 and 286) *[J. B. Heyman*

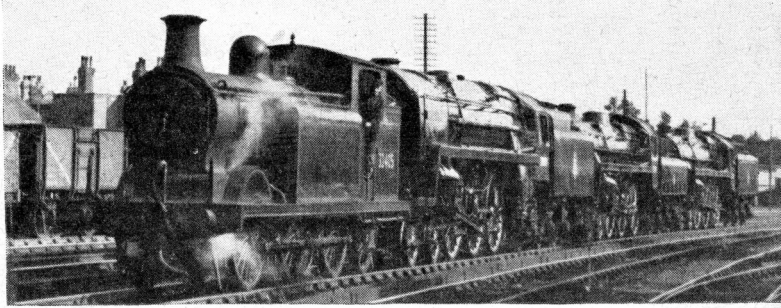
Above: CLIMBING HEMERDON BANK, W.R.—"King" Class 4-6-0 No. 6018 *King Henry VI* breasts the summit of the 1 in 42 with the Sunday 10.20 a.m. Plymouth — Paddington express (15/4/51) *[J. F. Russell-Smith*

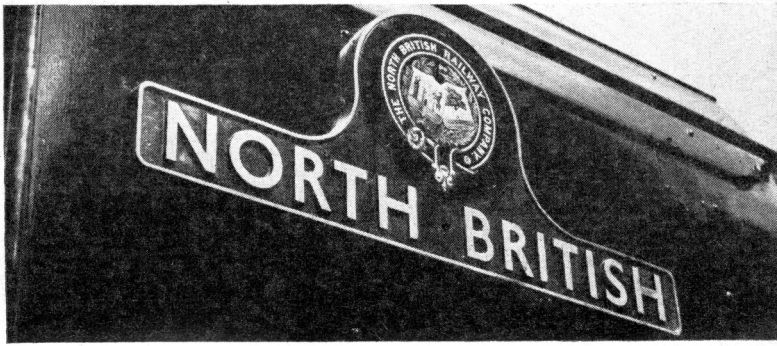
PHOTOGRAPHERS!

CLOSING DATE FOR ENTRIES IN THE 1951 "TRAINS ILLUSTRATED" PHOTOGRAPHIC COMPETITION IS AUGUST 31st, 1951

See the June issue, page 182, for full details







NEWSREEL 1 — *Top left*: New Class "4MT" 4-6-0 No. 75000. *Top right*: W.R. "2021" Class 0-6-0PT No. 2104 is hauled dead on its way from Croes Newydd to Swindon for scrapping in a freight headed by 2-6-0 No. 5390, seen approaching Oxford (10/5/51). *Bottom left*: Queer shed-fellows—"V2" 2-6-2 No. 60956, S R. Pacific No. 34086 and a Class "U" 2-6-0 with a "BI" 4-6-0, off to Neasden shed from Wembley (7/4/51), where they had all arrived with specials for a football international. *Centre right*: S.R. Class "E5" 0-6-2T No. 32405 hauls standard locos. Nos. 70009, 75000 and 73001 from Eastbourne goods yard to the shed after the recent exhibition (see page 286). *Bottom right*: The new nameplate of "A1" Pacific No. 60161. No. 60113 has also been fitted with new plates of this type

(B.Rlys., J. B Heyman (2), R. Simpson, R. Vincent.

TRAINS of Thought

FROM THE EDITORIAL DESK

THE SHORTAGE OF LOCOMOTIVE CREWS, readers will be well aware, is causing the most serious concern to the Railway Executive. Although we have seen copies of two new posters appealing for recruits, intended for general display, we believe that the authorities are sadly neglecting a great potential breeding ground of keen locomotive men to whom an imaginative approach is needed—the young spotters. Granted, a drive to encourage locospotters to consider the railway service as a career would be in the nature of a long-term plan, but at the moment we see no ground for optimism that the situation will soon improve. Moreover, to forestall those prim enthusiasts of more advanced years who are so ready to lament that interest in railways is no longer the cultured preserve of serious-minded gentlemen, but commercialised indiscriminately for the young, let us admit that for a large proportion of these youthful spotters the hobby begins and ends in their early 'teens with number-taking pure and simple. But the evidence of our rallies and daily mailbag is that an ever-growing section of them develops into keen enthusiasts eager to broaden their knowledge of locomotives and railway operation. Among the second group of young enthusiasts, we are convinced, are many who could be persuaded to consider the footplate as their career, but we have yet to hear of any attempt by British Railways to take direct advantage of this opportunity to attract not only new recruits, but recruits, like the best of enginemen past and present, who will have the railway and enthusiasm for it in their blood.

(Continued from right-hand column)

Of the standard designs promised for 1951, we have still to see the "6MT" Pacific, and the 2-6-4 and 2-6-2 tanks. To complete the 12 standard types of British Railways, there will appear at later and unspecified dates: a multi-cylinder Pacific of some 40,000 lb. tractive effort; two 2-6-0 types, both of 5 ft. 3 in. wheel diameter, but of varying axle loads; a further light 2-6-0 with 5 ft. wheels and a companion 2-6-2 tank; and, finally, a 2-8-2.

THE STANDARD • • CLASS "4MT" 4-6-0

THE new standard Class "4MT" 4-6-0 is a lighter relation of the Class "5MT" described in our June issue, designed for almost universal availability over British main and secondary lines. Of existing types, the new locomotive is perhaps best compared with the Western "Manor." With the same boiler pressure and driving wheel diameter, cylinders of similar dimensions save for a 28 in. stroke as opposed to the typical Western 30 in., identical coal and water capacity in the tender and total engine weight just a ton lighter, the new engine's principal gain over its predecessor, which will extend its range of action, is in maximum width below the running plate,; here it is 8 ft. 7⅜ in. over cylinders, as compared to the "Manor's" 8 ft. 1¼ in

The boiler design is based on that of the standard L.M.R. Class "4MT" 2-6-4 tank, though the barrel is 9 in. longer and, since the water is delivered into the boiler through clack-valves at 30 deg. from the boiler centre-line, the familiar top-feed casing is absent. The same modern aids to servicing are provided as on the "5MT"—self-cleaning smoke-box, a rocking grate divided into two portions that can be rocked separately (but of seven sections in all in this case) and a self-emptying ashpan with two hoppers. Our previous assumption that the chime whistle had been standardised was wrong, for the new "4MT" has Western single-note whistle (as will all but the largest standard engines) in the conventional position ahead of the cab, mounted on the manifold.

The light 4-6-0 is fitted with plain bearing axleboxes to all wheels, and Timken roller bearings are found on the tender only, which resembles that of the Ivatt Class "2MT" 2-6-0 in appearance. The 10 in. diameter piston valves are operated by conventional Walschaerts valve gear, with a maximum travel of 7 11/32 in. at 77 per cent. cut-off, and the reversing gear is of the same type fitted to the earlier B.R. standard engines. Although the cab layout is generally similar to that of the Class "7MT" Pacific and "5MT" 4-6-0, the space is more restricted to suit a smaller loading gauge.

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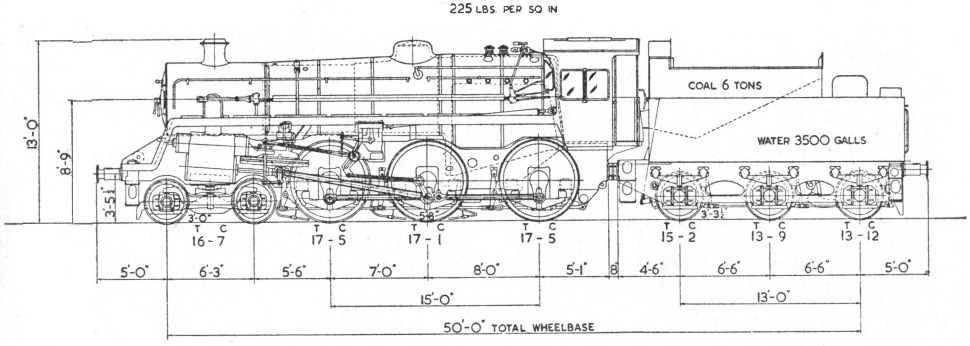


Boiler Barrel Diameter (outside)	4' 9" increasing to 5' 3"	Free Flue Area	3.78 sq. ft.
Firebox (Outside)	8' 6" Long × 4' 0⅛"Wide	Grate Area	26.7 sq. ft.
Tubes	21 Large 5⅛" O.D.×7 SWG	Cylinders (Two)	18"×28"
	157 Small 1⅜" O.D. 12 SWG	Tractive Effort	25,100 lb.
Superheater Elements	1⅜" O.D.×10 SWG	Adhesion Factor	4.6
Length between Tubeplates	13' 0"	Brake Percentage Engine and Tender	55.1
Heating Surfaces : Tubes	1,301 sq. ft.	Boiler Type	BR 4
Firebox	143 sq. ft.	Tender Type	BR 2
Total Evaporative	1,444 sq. ft.		
Superheater	265 sq. ft.		

LOCOMOTIVE RUNNING PAST AND PRESENT

by Cecil J. Allen
M.Inst.T., A.I.Loco.E.

Waterloo—Bournemouth

PART ONE

IF ever the Southern Railway had desired to achieve a high speed record to match the historic efforts of the London & North Eastern and London Midland & Scottish Railways, it had at least one perfect stretch of line on which to attempt the feat. This was, and is, the 16-mile stretch of line that cuts like an arrow, straight and true, through the Hampshire chalk from Litchfield Tunnel to Allbrook Junction, Eastleigh, on the Bournemouth main line of the one-time London & South Western Railway. It is a magnificent example of main line railway engineering as it ought to be, and dates back, of course, to the London & Southampton Railway. That this particular section proved difficult is seen in the fact that nearly a year elapsed between the completion from Waterloo to Basingstoke, on one side, and from Southampton to Winchester, on the other; during that year the gap was spanned by coaches. But in May, 1940, the line was finished.

So skilfully was the alignment planned that throughout from milepost 56 to milepost 72½ there is scarcely a scrap of variation in the gradient; it continues uninterruptedly at 1 in 252. Several tunnels had to be bored through the chalk, with deep cuttings, the material from which was used to form some high embankments: the cutting at Micheldever, between the tunnel and the station, was later enormously widened to provide chalk, and now houses quite a collection of sidings and workshops within its perpendicular sides. Of speed restrictions on this high speed length there are none; it used to be customary to moderate the speed slightly through Eastleigh, but this no longer seems to be necessary. The entire route is therefore practically free from restriction until the down train is well into Southampton, and the moment comes to turn right, from the original main line to Southampton Terminus, over the extremely sharp curve from Northam Junction round into the one-time Southampton West, now Southampton Central.

Despite its relative easiness, however, this is the type of line that could in the past be rather heartbreaking to the smaller engines, because of the long stretches that had to be covered without any respite in the "collar work." From Waterloo, for example, the engine has to be hard at it, for the most part on rising grades, as far as milepost 31, between Brookwood and Farnborough. The next 7 miles are level, but then the rise recommences and the last 6 miles of it, to the 52nd milepost, steepen to 1 in 249. For 52 miles out of Waterloo, therefore, there is very little downhill or level to give engine and crew a "breather." Then, of course, comes the sweeping descent to Southampton, which in the reverse direction, and especially if a high wind should be sweeping across from the west, can make things trying for an engine hauling a heavy up train.

West of Southampton there is more variety. Round the curve between Millbrook and Totton there is a speed restriction. After this there come sharp ups and downs through the New Forest, including a 2½-mile climb through Brockenhurst as steep in one part as 1 in 103, and followed by a corresponding drop through Hinton Admiral to Christchurch, where another curve compels a restriction, succeeded immediately by 1½ miles at 1 in 100 up past Pokesdown. There are some worse conditions west of Bournemouth, of course, such as the 1½ miles of 1 in 60 down through Parkstone to Poole, the 1½ miles at 1 in 91 up to Bincombe Tunnel, west of Dorchester, and, above all, the precipitous descent from the tunnel to Weymouth, for 2 miles at 1 in 50 to Upwey Junction, and for another mile at 1 in 74. But we are not concerned with the Bournemouth-Weymouth section in the present article.

Between Waterloo, Southampton and Bournemouth, the main concern of engine-crews always has been, and still is, water. It is a mystery to me that throughout all these past years, no attempt has ever been made, either by the London & South Western, or the Southern, or by British Railways, to lay down water-troughs on some of the inviting level stretches of line, say between Farnborough and Winchfield (serving both Bournemouth and Salisbury trains), at Whitchurch and near the 110 (Templecombe) or 130 (Crewkerne) mileposts on the Exeter line, and somewhere between Southampton and Totton on the Weymouth line. Drummond actually fitted some of his London & South Western tenders with water scoops, but that was as far as it went; no troughs were eventually laid, and eight-wheel tenders carrying from 4,500 to 5,800 gallons had to be fitted instead.

Even then, the pre-war 108-mile non-stop runs between Waterloo and Bournemouth could give drivers some anxious moments. To-day, with the notoriously thirsty Bulleid Pacifics, it is the regular practice of drivers to gain time to the first stop, be it Southampton, Winchester, or even Basingstoke, so as to replenish their tender tanks at the earliest possible opportunity.

My first Bournemouth journey was on one of Drummond's massive "Paddle-box" 4-6-0s—four-cylinder machines of which the first had been turned out of Eastleigh in the previous year, and Drummond's only 4-6-0 design to have 6 ft. 7 in. driving wheels. In 1912, therefore, these engines were the pride of the line on the L.S.W.R. I rode with Driver Densley on No. 459; the train was the 2 p.m. from Waterloo, which for many years was booked to make a rather unusual non-stop journey from Waterloo to Christchurch. For this run of 104.3 miles the time allowed was 116 minutes, so that the speed required was roughly the same as with one of the two-hour Bournemouth trains. The full load was 270 tons; it comprised ten non-corridor bogie vehicles of period L.S.W.R. stock.

A special slowing was enforced through Esher, as Hurst Park races were in progress; for this reason, though we had passed Surbiton, 12.0 miles, in 16 min. 40 sec., it took 29 min. 55 sec. to get through Woking, 24.4 miles, where we were 2 minutes late. Over the 23.4 miles on to Basingstoke we spent 25 min. 15 sec., but at the end of the 1 in 249 ascent the engine was going well, as we were doing 53 m.p.h. Then Densley made full use of the long descent from Litchfield, on which speed raced up to 83½ m.p.h. (incidentally, the schedule of those days allowed no more than 25 minutes for the 25.8 miles from Basingstoke to Eastleigh), and after tearing through Winchester in 73 min. 50 sec. (66.6 miles), we ought to have been pretty well back to booked time by Eastleigh but for signals being on at Allbrook Junction—a severe slowing. From this the engine recovered so rapidly as to be doing 68 m.p.h. through Swaythling, and as a result we were ¼-min. early through Southampton West —79.2 miles in 86 min. 45 sec. With some smart running beyond, we cleared Brockenhurst, 92.8 miles, in 102 min. 15 sec., and pulled up smartly at Christchurch in 114 min. 10 sec. from Waterloo. Our net time had been about 111 minutes (5 minutes inside booked time), and would have taken us into Bournemouth Central, had we been non-stop, in about 116 minutes from London.

On a return journey with the two-hour 2 p.m. from Bournemouth, I was made forcibly to realise how the water question could influence the driving method. Once again we had a ten-coach train of non-corridors, with a six-wheel brake as well, but no more than 270 tons all told; the engine this time was a large-boilered 4-4-0, No. 419, Class "L12," whose tender, though an eight-wheeler, held no more than 4,000 gallons. At this early date, of course, no superheaters were in use to help with water economy, and Driver Childs therefore was indisposed to hurry his engine over the early stages. Thus we took 6 min. 15 sec. to Christchurch, 3.6 miles, and though I had to hold on tight as we hurtled round the curve at 64 m.p.h., speed dropped to 38 m.p.h. up Hinton Admiral bank; 68 was touched through Brockenhurst and 64 before Totton, where we slowed for the curve. To Southampton West, 28.7 miles (35 min. 15 sec.), we had dropped 1¼ minutes, but with the ultra-generous 9-minute allowance for the 5.6 miles on to Eastleigh (doubtless to encourage appropriate respect for Northam curve!), we were on time there, having taken 42 min. 35 sec. for the 34.3 miles.

The timetable now demanded that we complete the whole of the climb to Litchfield, and continue to Basingstoke, with no more than 28 minutes for the 25.8 miles, and Childs told me quite frankly that he expected to drop 4 minutes along this length. With a sustained speed of 44½ to 43½ m.p.h. on the 1 in 252, this is precisely what he did; his time from Eastleigh to Basingstoke was 32 min. 5 sec. We had now between 45 and 46 minutes left; should we do it? The answer was "yes." For a non-superheated engine of these dimensions, and with quite a substantial train, the going was grand—74 m.p.h. before Hook, 62½ minimum over milepost 31, and 76½ at Byfleet—these gave times of 20 min. 55 sec. over the 23.4 miles from Basingstoke to Woking, followed by 18 min. 40 sec. for the 20.5 miles on to Clapham Junction (43.9 miles in all in 39 min. 35 sec.), and with a gentle finish we were at a stand in Waterloo in 120 min. 30 sec. from Bournemouth—a stirring finish to a fine run.

Incidentally, the graceful old Adams 4-4-0s could put up quite a turn of speed when occasion demanded. I have turned up details of a couple of runs as late as 1916, when engines of this type were drafted at a moment's notice to take the place of bigger engines which had failed. No. 565 had to take over at Woking the 12.30 p.m. down Bournemouth express, with a 53-axle load of no less than 375

tons. In the circumstances it was small wonder that the rising 8.8 miles to Farnborough took 17 min. 45 sec., and 36 min. 5 sec. was needed to get through Basingstoke, 23.4 miles, and 51 min. 50 sec. to Micheldever, 33.7 miles. But from there the veteran galloped down the hill, actually averaging 72 m.p.h. over the 15.4 miles to Eastleigh, so that the 54.8 miles from Woking to Southampton West were run in 72 min. 30 sec. start to stop. In the reverse direction No. 682 did even better with a much lighter train of 290 tons; coming on at Basingstoke, No. 682 passed Woking in 25 min. 5 sec., Surbiton, 35.8 miles, in 36 min. 20 sec., and Clapham Junction, after a check costing a minute, in 45 min. 30 sec. So the 46.5 miles from Basingstoke to Vauxhall were covered in the most creditable time of 49 min. 55 sec., start to stop.

Probably the most efficient performers among the 4-4-0s at this early period were the Drummond "D15" class of 1912—the largest 4-4-0s he built and very handsome and capable engines. Nos. 463 to 472 could generally be relied on by the observer to give him a good run, though I have not been able to turn up any outstanding records of their performances that I enjoyed personally.

With the advent of the Urie "King Arthur" 4-6-0s there came in a higher standard of work, so efficient that, with 5,000 gallon tenders, the water difficulties of the Bournemouth non-stop runs appeared to have been considerably reduced. The load of the "Bournemouth Limited"—the name assumed by the 4.30 p.m. from Waterloo to Bournemouth in the early 1930s—was limited to 360 tare tons, but the run that follows shows that a "King Arthur" could take something well over this figure, and gain time substantially in addition, without running out of supplies, on the contents of a 5,000-gallon tank. On the occasion to which I refer, in 1934, the then usual ten or eleven bogies had been increased to twelve, making 385 tons tare and 415 tons gross behind the tender of No. 784 *Sir Nerovens,* which was most ably handled by Driver G. Baker.

A very bad road was obtained from Waterloo to Surbiton, with both signal and permanent way checks, and this initial 12.0 miles took 19 min. 45 sec. But some magnificent running followed, with 70½ m.p.h. at West Byfleet, a minimum as high as 58 m.p.h. over milepost 31 summit, 71½ m.p.h. on the level at Winchfield, 66 before and no less than 73½ after Hook; this gave the remarkable time, for a "King Arthur" so loaded, of 32 min. 30 sec. for the 35.8 miles from Surbiton to Basingstoke, all "against the collar," as has been emphasised already. So the passing time to Basingstoke, 47.8 miles, was 52 min. 15 sec., ¾-minute inside schedule despite the delays; net time to this point was 48 minutes.

There was now no need to hurry, so speed down the long incline was not allowed to exceed 77½ m.p.h., but even so the "Limited" was through Winchester, 66.6 miles, in 70 min. 20 sec., Eastleigh, 73.6 miles, in 75 min. 52 sec. —just over 71½ minutes net, or well under "even time"—and Southampton West, 79.2 miles, in 82 min. 58 sec. (78¾ minutes net). Here the train was 3 minutes early, and the rest was simple. The only other speed of note was 75½ m.p.h. through Hinton Admiral; the time to Brockenhurst, 92.8 miles, was 100 min. 38 sec., and to Christchurch, 104.3 miles, 112 min. 5 sec., and the "Limited" was pulled up finally by signals outside Bournemouth Central in 116 min. 32 sec. from Waterloo. The net time from Waterloo to Bournemouth, start to platform stop, was not more than 113¼ minutes, a very fine effort indeed.

Next there appeared on the scene the Maunsell "Lord Nelson" 4-6-0s. In the early stages of their history, their performances were erratic; at times one would have a good run, and at other times they would fall considerably short of "King Arthur" standards. After they had been taken in hand by Mr. O. V. S. Bulleid, however, it was a different story. The front end modifications, and the Lemaître multiple-jet exhaust, added astonishingly to their steaming capacity, and since then, even if now overshadowed by the revolutionary Bulleid Pacifics, they have been amongst the most reliable and best-liked engines on the line.

The super-expert with a "Nelson" was Fred Payne, of Nine Elms, and many records remain of his prowess. The train on which the capacity of these engines has been tested to the utmost was, of course, the "Bournemouth Belle" the week-end loading of which could and still does produce loads round about the 500-ton mark. Payne's engine was No. 865 *Sir John Hawkins,* and he could do pretty anything he liked with his mount.

On one outstanding up run, for example, he had behind him twelve Pullmans weighing 462 tons tare and 495 tons gross. Without any higher maximum speed than 70 m.p.h. (before the Totton slowing), but the excellent minimum of 46 up Hinton Admiral bank, Payne ran from Bournemouth Central to Southampton Central, 28.7 miles, in 33 min. 30 sec., so gaining 2½

minutes. Then, having passed Eastleigh, 5.6 miles, in 10 min. 22 sec., he attained 50 m.p.h. at the foot of the 16½-mile climb at 1 in 252, and increased his speed steadily until the engine topped the rise triumphantly with 55½ m.p.h. past Litchfield box. So the 28-minute booking from Eastleigh to Worting Junction was cut by 2¾ minutes, and Basingstoke, 31.4 miles, was passed in 35 min. 36 sec., 1½ minutes inside schedule.

Without a vestige of a check *Sir John Hawkins* speeded on; there was no greater variation in speed than between 76½ m.p.h. before Hook, 70½ at milepost 31, and 75½ past Woking and Byfleet; the 23.4 miles from Basingstoke to Woking took 18 min. 57 sec., and the 19.4 miles on to milepost 5 occupied 16 min. 37 sec., so that No. 865 had done 74.2 miles from the start in 73 min. 23 sec. Though speed was reduced to 30 m.p.h. through Clapham Junction, so that the last 5 miles needed 7¾ minutes, the run of 79.2 miles from Southampton was completed in 81 min. 10 sec., instead of the 86 minutes booked. On such a showing as this, a "Nelson" could make the Bournemouth-Waterloo run, given a clear road, in 113 to 113½ minutes, even with all but 500 tons of train.

The "Nelsons" have always had a fine turn of speed when pressed, as was proved on another occasion when the same engine and driver, with an eleven-coach train of Southern corridor stock weighing 375 tons gross, averaged 79.0 m.p.h. over the entire 37.0 miles from Worting to Hampton Court Junction, and 80.1 for the 26.1 miles from Basingstoke to Byfleet, hurtling through Woking at a steady 84. But this was with an Exeter line train. Payne and his engine also had to their credit a down run with the "Bournemouth Belle" and 505 tons on which he passed Woking in 26 min. 37 sec., Basingstoke in 49 min. 31 sec., Winchester, 66.6 miles, in 67 minutes exactly, at 80½ m.p.h., and Shawford, 69.7 miles, in 69 min. 46 sec., after which signal checks befell. Southampton Central might have been reached easily in 80 minutes on this run—a gain of 7 min. on schedule—but the actual time was 83 min. 47 sec.

I must leave till another article what happened with the introduction of the "Schools" and of the immensely capable Bulleid Pacifics.

Since this series began, the standard of present-day running has shown signs of considerable improvement. As we feel readers would like to be kept informed of contemporary work, we have asked Mr. Cecil J. Allen to devote alternate articles, commencing next month, to surveys of current running on British main lines.

THE KENT & EAST SUSSEX *in 1951*

by M. LAWSON FINCH

IN the spring of this year I decided that I must revisit the Kent & East Sussex Railway. The day was heavily overcast and equanimity was further unsettled when, at Headcorn, on the Tonbridge-Ashford main line of the S.R. I was greeted by a well-remembered retainer of the K. & E.S.R., Guard Sharp, with the tidings that the 1.20 p.m. to Tenterden had come under the axe of the coal cuts then prevailing. However, as neither myself, my companion nor a much distressed lady who had also booked through to Tenterden were aware of this cut, British Railways took pity on us. At 1.45 p.m. we were allowed to join a mixed train of one coach, five wagons and brake which set off behind Class "O1" 0-6-0 No. 31370, with which Driver Hazell and Fireman Masters had been shunting in the yard on our arrival.

Frittenden Road Station appeared to be closed, and we whistled our way onward to Biddenden. We soon noticed that the uppermost layers of paint on the prominent station nameboards have peeled off, revealing the bygone background of dark and glossy blue to the large white letters; this blue, by comparison with poor quality of later coats of black, is still in almost mint condition, and shows up well at several stations. At Biddenden our whistle startled someone into emerging from the buildings to change the staff and pass the time of day. A van, probably lost, was visible amid the grass of the station yard, while the crossing was guarded by brand new "whistle" signs in white lettering on a light green ground.

The stationmaster welcomed us at High Halden Road, home of a quaint wooden, double-armed signal, where a platelayer joined our party. Rolling onward (mostly from side to side) through Tenterden St. Michael, we came to rest in Tenterden Town station at 2.11 p.m., after heralding our approach by a fanfare of whistles that would have done credit to the "Scotsman" seeking entry to King's Cross. Despite the fact that the train was not advertised, ticket collection at the exit was most meticulous.

After lunch in Tenterden it was 3 p.m. before we boarded the bus to Rolvenden, where once again we encountered No.

31370 shunting in the yard. This 61-year-old veteran, rebuilt by Wainwright in 1906 from the original Stirling "O" Class, is a sister of No. 1371 of the late and lamented East Kent Railway. In the shed was K.E.S.R. No. 3, still painted light green but unlined, now Class "A1X" 0-6-0 tank No. 32670 and bearing a smokebox numberplate to that effect; I am lucky enough to possess one of her original *Bodiam* nameplates. No. 3 was built at Brighton in November, 1872, as No. 70 *Poplar,* and thus yields narrowly the title of British Railway's oldest locomotive to No. 32636 of the same class, turned out a fortnight earlier as No. 72 *Fenchurch.* As No. 670, *Poplar* alias *Bodiam* was purchased by the Rother Valley Railway in May, 1901 (her last L.B. & S.C. home was Battersea) and with No. 1 *Tenterden* and No. 2 *Northiam* comprised the entire locomotive stock of that company. No. 3, as No. 670 had now become, carried the R.V.R. livery until 1933, when it was rebuilt with new boiler and parts from the Shropshire & Montgomery Light Railway's No. 7 *Hecate* (L.B. & S.C. No. 81 *Beulah,* built July, 1880) and K. & E.S.R. No. 5 *Rolvenden* (L.B. & S.C. No. 71 *Wapping,* built October, 1872). In September, 1947, she was rebuilt to Class "A1X" at Brighton and repainted in malachite green, with frames chocolate colour inside and red outside, and red guard irons; she still retains the Stroudley chimney. For her part in the recent film "The Loves of Joanna Godden," plates lettered "S.E.C.R." were affixed temporarily to her tank sides.

At the back of the shed we came upon No. 32678 (L.B. & S.C. No. 78 *Knowle,* built June, 1880), her boiler empty. She was painted black and fully lined out in B.R. style, but bore no lettering of any kind; her one piece, cast chimney had a Drummond air. *Knowle* was renumbered 678 in 1907, before which it had been fitted for motor working, and rebuilt to "A1X" in November, 1911. In 1900 she worked from Eastbourne on the "Cuckoo Line" to and from Hailsham and was later stationed at Littlehampton and Horsham; always the countryman, she visited London but once, on a relief turn to Coulsdon in March, 1920. She was withdrawn in 1925 as No. B678, but was stored in Preston Park paint shop from 1926-9 and in May of the latter year, with her bunker extended, was despatched to the Isle of Wight as No. W4, where *Bembridge* nameplates were added at Ryde soon after arrival. Renumbered yet again, to W14 in 1932, she was returned to the mainland in June, 1937, to become No. 2678 and work the Hayling Island branch from Fratton. She began work on the K. & E.S.R. in 1940, and achieved new fame by diving into the mud near Northiam on March 26, 1949. Gloomy predictions that this would be her grave were falsified when she was rerailed by two 36-ton cranes a month later and towed to Rolvenden, where she was found to be little the worse for wear.

The line's third "Terrier" is No. 32644 (L.B. & S.C.R. No. 44 *Fulham,* built June, 1877) which, in lined-out black and lettered "British Railways," was in steam throughout the day of my visit; alas! she has since been withdrawn. Boasting a cast and capped chimney, and a 74A shed plate but no smokebox numberplate, she had been with the K. & E.S.R. since the summer of 1949. At least two other "Terriers" have operated on the K. & E.S.R. since 1940—No. 32655 (L.B. & S.C.R. No. 55 *Stepney,* built December, 1875) and the celebrated No. 32640 (L.B. & S.C.R. No. 40 *Brighton,* built March, 1878. The average age of latter day K. & E.S.R. motive power is therefore high!

It was the erstwhile *Fulham* that returned us to Headcorn on the 4.40 p.m. "mixed," consisting of a brake third, four wagons, two vans and a brakevan. In the darkness and pouring rain then prevailing, however, all I can report of this trip is that at Northiam we picked up about 10 men who had been working on the line, together with three or four ordinary travellers; but all in all it had been a most enjoyable day.

FIRST APPEARANCES

Class "2MT" 2-6-2 tank No. 41278 (*see April issue*) was not the first of its type to visit Seaton shed, for No. 41200 spent several days of working there during the 1949 and 1950 summers in the course of trips to and from Suffolk for operation on the Aldeburgh branch. For many years Seaton and Rugby shared 0-4-4 tanks Nos. 58082/3 for work on the Uppingham branch, while 2-6-2 tank No. 40180 operated from Peterborough. When 58082 was withdrawn in 1950, *ex*-L.N.W. 2-4-2 tanks from various sheds were run in over the branch after repair at Rugby works, while No. 58083 remained at Rugby, until the reallocation of No. 41278. No. 40180 was replaced by "C12" 4-4-2 tank No. 67362.

The appearance at Luton (Bute Street) of "4MT" 4-6-0 No. 43003 (*April issue*) was not unique, we learn. Piloted by 2-4-2 tank No. 46666, No. 43002 arrived there with a football excursion from Bletchley on 17/9/49, making a similar trip unaided the next Saturday, and succeeded by No. 43001 on the two following Saturdays. Class "4F" 0-6-0s and even *ex*-L.N.W. 0-8-0s have regularly taken over the branch passenger workings from Leighton Buzzard from the regular 2-4-2 or 0-6-2 *ex*-L.N.W. tanks for the past 20 years or more, while earlier this year 2-6-2 tank No. 41222 was seen. [H. G. Clements, G. E. Jones.]

● **STOP PRESS:** Pacific No. 70000 made a first appearance at Kings Cross on 18/6/51, returning from a York exhibition on the 5.34 p.m. arrival from Newcastle. The first "6MT" Pacific, No. 72000, reached Neasden on 5/7/51 *[P. J. Coster*

The CALLANDER–OBAN LINE

By W. A. C. SMITH

IN recent years the scenic attractions of the former L.N.E.R. West Highland line have attracted considerable publicity, so much so that enthusiasts tend to ignore an equally interesting line that penetrates the Western Highlands. The Callander and Oban was incorporated in 1865 and opened throughout 15 years later. Unlike other routes through the Highlands, which had little hope of financial success, there were good prospects for tourist traffic along the new line and the importance of Oban was growing.

The first stage, opened in 1870, was to Glenoglehead, then called Killin, and by 1873 only 15 more miles of track had been completed. Indeed, when Tyndrum was reached the company was in such financial difficulties that plans for the extension westwards were abandoned. However, the Caledonian Railway came to the rescue and the new extension from Tyndrum to Oban was authorised in 1874. Work was pushed forward rapidly, and on July 1st, 1880 the line was opened throughout to Oban. The bulk of the shares in the company were held by the Caledonian, who operated the line.

Although the ruling gradient is 1 in 50, it is the sharp curves that are the greatest handicap, for they make anything in the way of fast running impossible and restrict the locomotive power. The Callander and Oban line does not actually begin until ¾ mile east of Callander station, but Stirling is the frontier between Lowlands and Highlands and trains to Oban leave the main line to Aberdeen after the ascent to Dunblane, taking the track of the one-time Dunblane, Doune and Callander Railway, 11 miles long and single track after Doune. Along this stretch the rolling grasslands give way to a wilder landscape of bracken and outcrops of rock, with the mountains looming ahead, range upon range fading into the blue. Callander, on the fringe of the famous Trossachs, lies ahead. The station here is neatly laid out and until recently boasted one unusual feature—a clock tower crowning the footbridge. However, one morning in the summer of 1948 ten wagons broke away from a freight train in the Pass of Leny and ran back into Callander station, where they collided with the rear of the 7.55 a.m. Callander to Glasgow passenger train, partly demolishing the overbridge, later removed entirely.

Leaving Callander, the line bridges the River Leny and then pierces the mountain wall through the Pass of Leny. Blasting up the 1 in 50 gradient along the flank of Ben Ledi, the train crosses and recrosses the rushing River Leny by slender bowstring girder bridges, to find itself on level track alongside Loch Lubnaig, at the head of which stands Strathyre station.

Still climbing through the historic Rob Roy country, the line forges on to Balquhidder, one of the most important intermediate stations on the route as it is the junction for Crieff. Thereafter the train strikes the ascent to the 940 ft. Glenogle summit; as it climbs higher to the accompaniment of a thunderous exhaust, a fascinating view of Loch Earn opens out below and the graceful curving viaduct of the line to Crieff, over 100 ft. down the hillside, seems but a stone's throw away. After winding deeper into Glen Ogle, the line reaches Glenoglehead. A brisk run downhill at 1 in 69 brings us to Killin Junction, set in fir trees—an oasis in the expanse of moorland. The station is an exchange platform only and there is no access to it from the main road, which is about ½ mile away lower down the hillside.

On the run down to Killin Junction, much of the length of Glen Dochart is visible, with Killin and the head of Loch Tay at the eastern end and the mighty peak of Ben Lawers looming high in the background. A single line branch leaves the main line at Killin Junction and descends steeply for 4 miles to the village of Killin. From Killin to Loch Tay pier station the line is now closed to passenger traffic, although it is used by the branch engine working to the small shed at Loch Tay; in pre-war days, however, it was sometimes used by excursion trains and the small railway-owned steamer, *Queen of the Lake,* sailed on the loch. She was laid up in 1939 and has now been broken up.

Leaving Killin Junction for the west the railway begins a gradual descent to the River Dochart. An almost level run follows between the wild hills and through Luib station to Crianlarich. In contrast to that of the West Highland, the former L.M.S. station is of little importance, although there is a connection with the ex-L.N.E.R. line which is used for the interchange of goods traffic, excursion trains and, since 1949, in summer, by a daily passenger train from Glasgow (Queen St.) to Oban. Passing beneath the West Highland line viaduct,

the Oban line faces a moderate climb to Strathfillan and then, after running abreast of the West Highland line on the other side of the valley, the gradient stiffens up to Tyndrum. The restart from this station is up a grade of 1 in 49, before the line suddenly drops down a hill steepening to 1 in 55—a fiercesome proposition for eastbound trains. Then, with the scene dominated by the famous Ben Cruachan ahead, Dalmally is reached, and after bridging the River Orchy two miles further on, the train comes on the lovely Loch Awe, skirting the water's edge along a wooded slope to Loch Awe station and pier. In summer the motor vessel *Countess of Breadalbane,* owned by the Caledonian Steam Packet Co., a railway subsidiary, sails on the loch and circular tours are run from Oban. This 106-ton vessel was built by Messrs. Wm. Denny of Dumbarton, erected in the builders yard, then dismantled and transported in sections by rail to Loch Awe, where she was reassembled and launched in May, 1936. During the war she was laid up and

Right: Near Tyndrum—Ex-Highland "Castle" class 4-6-0 No. 14686 *Urquhart Castle* with an Oban-Glasgow express: The Pullman observation car *Maid of Morven* is at the rear of the train. *Inset:* Loch Tay Station on the branch from Killin. *[F. R. Hebron, S. Oborne*

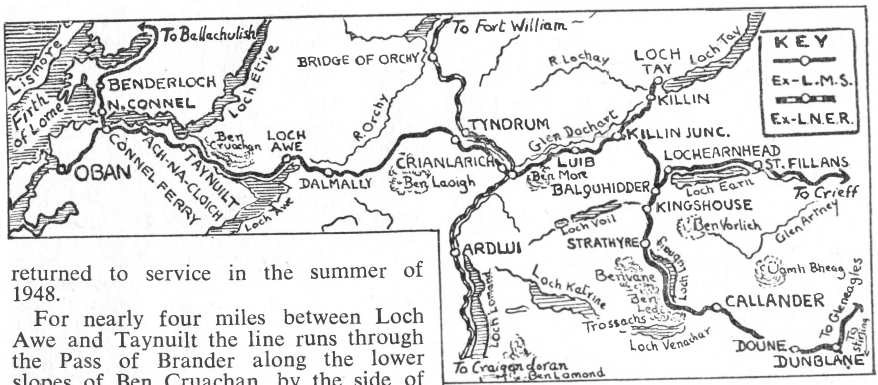
returned to service in the summer of 1948.

For nearly four miles between Loch Awe and Taynuilt the line runs through the Pass of Brander along the lower slopes of Ben Cruachan, by the side of the River Awe. Owing to the danger of falls of rock a system of special "automatic stone signals" is installed. These fourteen signals are entirely separate from the normal signalling system; each post carries an up and down arm, and as their normal position is "off," they offer the unusual sight of signals showing "line clear" in both directions on a single track. They are connected by a number of wires which form a screen along the hillside above the railway. As long as the wires are intact the signals remain "off," but should one or more wires be broken by a fall of rock, the signals in both directions go to danger and a bell rings in the nearest signal box.

However, despite these precautions mishaps occur, as on August 8th, 1946, when a large boulder bounced over the top of the screen, although the highest wire is over 7 ft. from the ground, and fell on the track. As no wire was broken the driver of the 6.5 a.m. Oban to Glasgow, hauled by a Class "5" 4-6-0, received no warning and was unable to stop in time to avoid a collision. The train was derailed, but the engines and coaches remained upright and came to rest on the edge of a steep drop 100 ft. above the river.

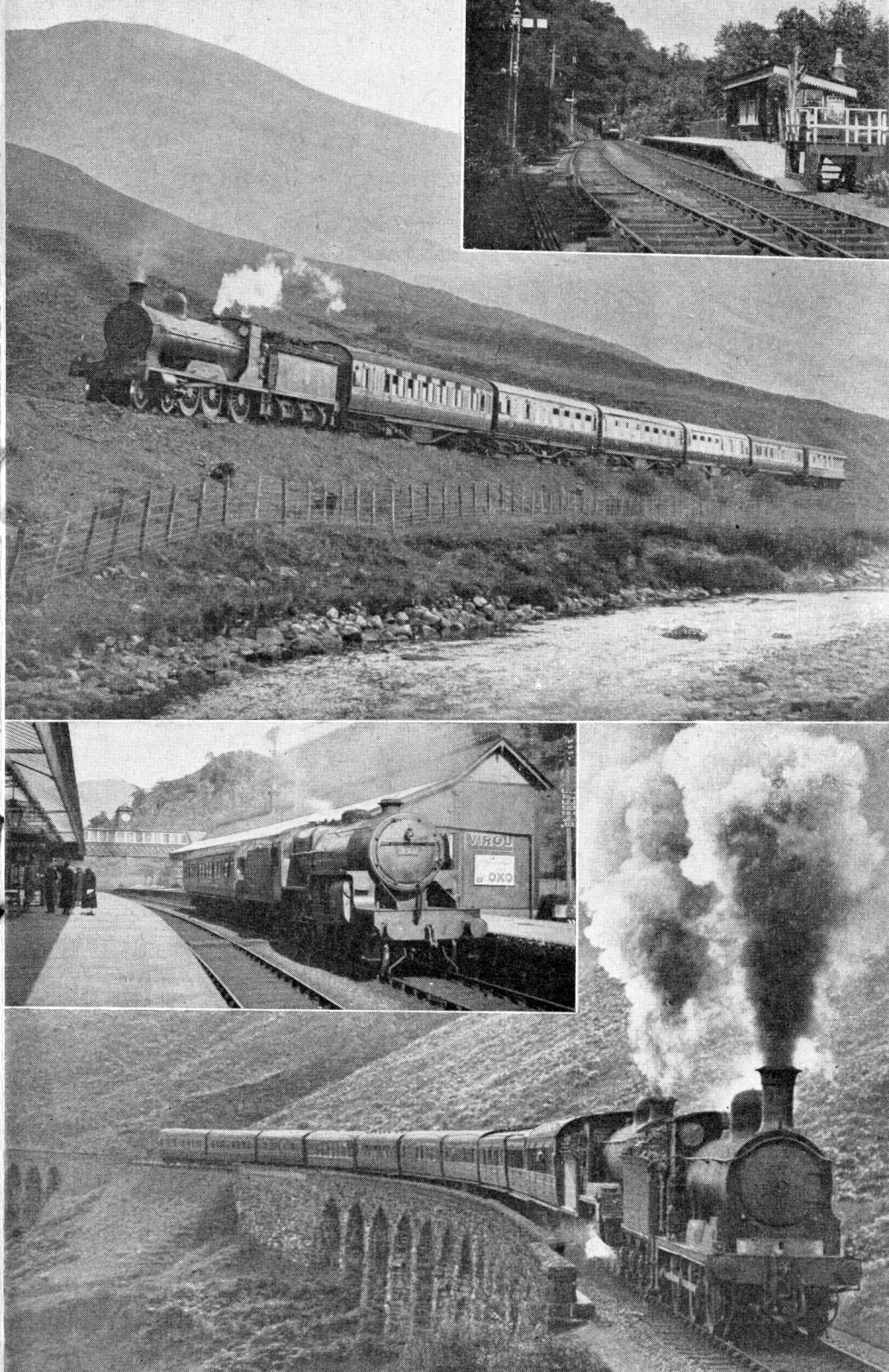
Leaving the pass Taynuilt is approached with the waters of Loch Etive visible ahead. Passing Connel Ferry Junction, where the line to Ballachulish branches off and crosses the graceful Connel Ferry viaduct, the Firth of Lorne lies before us. From Glencruitten summit, the line swings down, offering a breathtaking view across the bay to the blue hills of Mull, past a locomotive depot and through a cutting to Oban terminus, 71 miles from Callander.

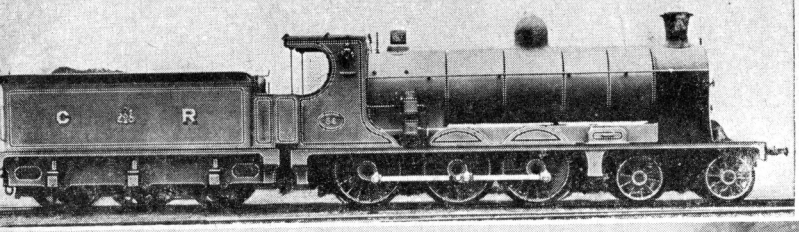
The distance from Glasgow (Buchanan



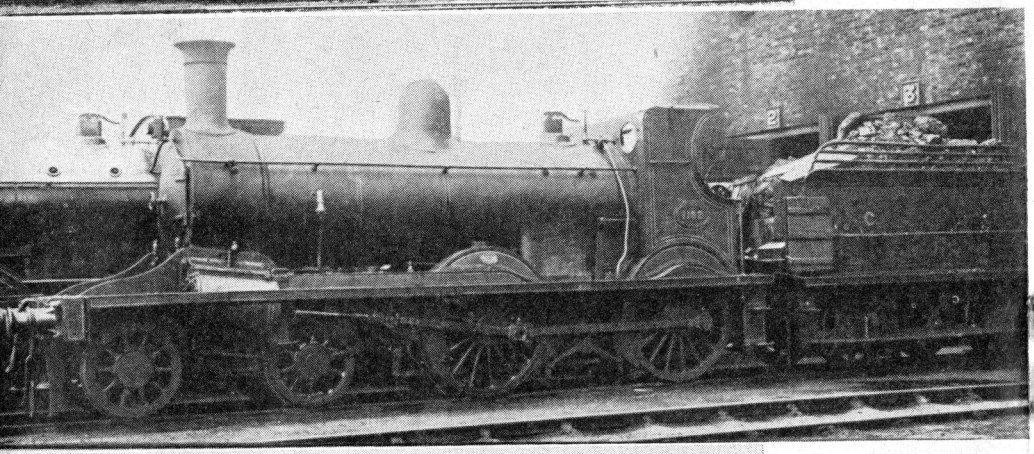
St.) to Oban is 117¼ miles and the journey takes about 4¼ hours. There are five trains daily (except Sundays) with additional ones on Saturdays during the summer; all have connections with trains or through coaches from Edinburgh (Princes St.), which join them at Stirling. There is always one train less from Oban since, while westbound trains are limited to six coaches, unless a pilot is provided, eastbound trains usually consist of eight coaches. On a Sunday there is a morning train from Glasgow (a recent request from Oban for one in the return direction has been turned

Right: Climbing Glen Ogle—Ex-C.R. 0-6-0 No. 17466 and ex-Highland 4-6-0 No. 14726 with an Edinburgh-Oban excursion. Note the Pullman car in L.M.S. red livery. *Inset:* Callander Station, showing the footbridge clock tower now demolished. Fowler 2-6-0 No. 2911 heads a lightweight Edinburgh train. *[F. R. Hebron, S. Oborne*


VIROL
OXO



MOTIVE POWER ANCIENT AND MODERN—*Left*: Caledonian "55" Class 4-6-0 No. 58. *[F. Mocre*



Above: "Oban Bogie" 4-4-0 No. 1182. *Left*: Ex-Highland "Clan" Class 4-6-0 No. 14764 *Clan Munro* shunting at Luib.

Below: Class "5MT" 4-6-0 No. 44957 between Crianlarich and Tyndrum with a Glasgow-Oban express.
[H. Gordon Tidey, S. Oborne, G. W. Goslin

down), and on weeknights there is a train from Glasgow at 10 p.m. which traverses the line in the small hours of the morning. A through carriage and a sleeping car from London are worked on the 7.30 p.m. from Euston and return on the 4.45 p.m. from Oban. Last summer the fastest train was the 8 a.m. (Saturdays only) from Buchanan St. which, with five stops, was allowed 3 hrs. 37 mins.

Coaching stock consists of ex-L.M.S. corridor vehicles and in summer the 12.12 and 5.10 p.m. from Glasgow carry restaurant cars, ex-Pullmans, which return on the 12.5 and 5.15 p.m. from Oban. In February of this year a winter restaurant car service was introduced on the 12.15 p.m. from Oban and the 5.10 p.m. from Buchanan St. The Killin branch train consists of a single non-corridor coach and is often "mixed," while the Ballachulish branch train is usually made up of two coaches.

In the summer of 1949 British Railways introduced a new service from Glasgow (Queen St.) to Oban via the West Highland line. This train, leaving Queen St. at 9.31 a.m. and returning from Oban at 6.25 p.m., takes the West Highland line to Crianlarich and there crosses over to the Callander & Oban. The connection at Crianlarich had never before been employed regularly by a passenger train, although its use had long been advocated, as it shortens the distance from Glasgow to Oban by some 16 miles. The train is composed of ex-L.N.E.R. stock, with buffet car in 1949/50, and is hauled by a "B1" 4-6-0, worked by an Eastfield crew to Crianlarich, where an Oban set takes over.

In 1923 a Pullman car service was inaugurated between Glasgow and Oban during the summer months. Pullman cars had appeared on the Caledonian Railway in the summer of 1914 but were shortly afterwards withdrawn owing to the war; besides dining cars a Pullman observation car was in use. This vehicle, named *Maid of Morven,* had been built in 1914 by Cravens Ltd., Sheffield, for the Pullman Car Co. with two passenger compartments, 22 easy chairs, eight tables and a small kitchen. It was attached to the rear of the 9.45 a.m. from Glasgow and returned on the 3.40 p.m. from Oban, and was at that time the only observation car running on public service in Britain. When the Caledonian Railway agreement with the Pullman Car Co. expired in 1934 the Pullman cars on the Caledonian section, including *Maid of Morven,* were bought by the L.M.S.R. and painted in the latter's colours. This fine car, unfortunately, is no longer in use.

Almost from the opening of the Callander & Oban line the Caledonian worked it with special engines, the first being a class of 2-4-2 tanks designed by Brittain and based on the L.N.W.R. radial tanks. They proved very unsatisfactory and soon disappeared; later they made a brief appearance on the Caledonian Glasgow underground line. A year later, in 1882, the famous "Oban Bogies" appeared and worked the line for twenty years. These 4-4-0s, with 5 ft. 2 in. driving wheels, were paired with shortened four-wheel tenders owing to the diameter of the Oban turntable; they were built by Dubs & Co. to the design of Brittain, which included cylinders, stovepipe chimneys and rounded cabs. The last, L.M.S. No. 14103, was scrapped in 1930.

In 1902, the McIntosh "55" class mixed traffic 4-6-0s were built for the Oban line and were the first inside cylinder six-coupled bogie engines in Scotland. With a tractive effort of 23,269 lb. they worked normally between Stirling, Callander and Oban and proved efficient on both passenger and goods trains; they had a good turn of speed on the level, too, in spite of their 5 ft. driving wheels. By 1905, nine of them had emerged from St. Rollox works. During the 1914-18 war one worked over the Highland line when that company was short of motive power. With the strengthening of the bridges on the Callander & Oban section by the L.M.S.R. two of these engines, Nos. 14606/7, were rebuilt in 1930 with larger boilers taken from the "918" class 4-6-0s, the last of which had been scrapped in that year. The cab was also widened and the roof lengthened but, despite this rebuilding, the class was extinct by the end of 1937. When the grouping took place in 1923 the "191" class 4-6-0s were under construction at St. Rollox. These two-cylinder engines, designed by Pickersgill for the Oban line, had 5 ft. 6 in. driving wheels and a tractive effort of 23,555 lb. The last, No. 14621, was withdrawn from service in 1945.

Some ten years after the grouping the L.M.S.R. decided on a startling change in motive power and transferred several ex-Highland Railway "Clan" class 4-6-0s to the Callander & Oban line. They proved very successful and were popular with the "Caley" enginemen. In the years before the war they were the mainstay of both ordinary and excursion workings to Oban, double-headed when necessary by the Pickersgill 4-6-0s, ex-H.R. "Castle" 4-6-0s or ex-C.R. 0-6-0s. They were allowed to handle trains of up to 255 tons unaided; on occasions as much as 300 tons and more. The "Clans," designed by Cumming in 1919,

had 6 ft. wheels and a tractive effort of 23,688 lb. The last, No. 54767 *Clan Mackinnon,* then stationed at Inverness, was scrapped in 1950 *(April, 1950, issue).* Up to 1939, another ex-Highland design, the "Castle" class 4-6-0s, were also to be seen working over the Callander & Oban line. The last of them to be scrapped was No. 14690 *Dalcross Castle,* shedded at Aviemore, which was withdrawn in 1947.

The Oban trains are now worked entirely by the ubiquitous Stanier mixed traffic 4-6-0s, used in pairs when necessary. They appear also on goods trains, supported in this work by ex-C.R. 0-6-0s. The Killin and Ballachulish branches are usually worked by ex-C.R. 0-4-4 tanks, from Stirling and Oban respectively, which are accommodated in the small sheds on these branches. Stirling-Callander trains are hauled by McIntosh and Pickersgill ex-C.R. 4-4-0s. The usual allocation at Oban shed consists of four ex-C.R. 0-4-4 tanks and two ex-C.R. 0-6-0s (Nos. 55187/96, 55215/63, 57254 and 57396 at the time of writing), which are employed on short distance passenger and freight traffic to Ballachulish and station pilot duties at Oban with, in summer, a service to Loch Awe in connection with the pleasure steamers. St. Rollox and Stirling sheds provide the class "5MT" 4-6-0s for all other work.

So far the popular pre-war Sunday excursions from Glasgow to Oban have not been restored, although similar trains are back on the West Highland line, but in summer day tickets are issued every Tuesday, Wednesday and Thursday for travel by the 9.31 a.m. train from Queen St. to join the *Countess of Breadalbane* for her afternoon cruise on Loch Awe, while an occasional "combined" day excursion is run from Queen St. to Oban, returning to Buchanan St.

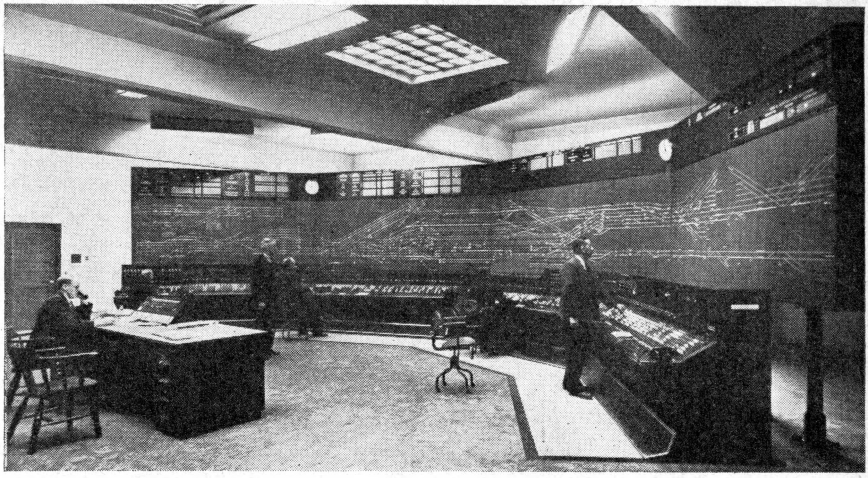
CROSS-COUNTRY TANK—S.R.-built "4MT" 2-6-4T No. 42090 at Mount Pleasant crossing, Southampton with the 11.30 a.m. Brighton-Plymouth express. On the left is Class "LN" 4-6-0 No. 30857 *Lord Howe* with the 11.30 a.m. Waterloo-Bournemouth express (15/6/51). *[G. W. Puntis*

A NEW "GOLDEN ARROW"

ON June 11th last the new "Golden Arrow" train was put into service, though an order for seven new cars was placed by the Pullman Car Co. with the Birmingham Railway Carriage and Wagon Co. as long ago as 1938; the war, however, brought work to a standstill, and building was not resumed until 1949. The formation of the new train is as follows:

1st Bke. *Minerva*	1st Kitch. *Orion*
1st Kitch. *Aquila*	1st Parl. *Perseus*
1st Parl. *Cygnus*	1st Kitch. *Carina*
1st Parl.	2nd Parl. No. 35
(& Bar) *Pegasus*	2nd Brake No. 208
1st Parl. *Hercules*	

The underframes are of the latest ex-L.N.E.R. design, with heavy double-bolster bogies of 8 ft. 6 in. wheelbase, and 65 ft. 10 in. over buffers. The customary straight-sided bodies have two novel features. Firstly, the familiar Pullman multi-coloured, oval side lights have been replaced by rectangular windows of green hammered glass; and, secondly, the main car windows are double-glazed to improve visibility, reduce noise and maintain constant temperature, after the style of the "Devon Belle" observation cars. The interior decorations are in the usual luxurious Pullman style. A new "Trianon bar" has been built into the *Pegasus* car, where an ingenious form of "stand-up" bar seat replaces the tall stools, not altogether satisfactory for use in trains, in the shape of narrow upholstered ledges fitted to the walls of the car facing the bar. In common with other Pullman trains, the new "Golden Arrow" is equipped with public address system throughout. In the kitchen cars, the cooking is by Calor gas, the cylinders of which are mounted in steel boxes beneath the underframes; the Pullman Car Co. has been experimenting with this medium for some time.



Above: THE NEW CONTROL ROOM AT YORK

A SIGNALLING MARVEL AT YORK

A REMARKABLE British signalling achievement was brought to completion on May 27th last, when the final stages of the vast resignalling operation at York were carried out. At a cost of over £500,000 the work of eight mechanically operated boxes has been concentrated in one new air-conditioned control room on the station itself, embodying the largest route relay interlocking scheme in the world. Here a staff of 27, as against the total of 70 required for the original boxes, maintains and operates one switch panel, above it a panoramic diagram of all the lines from points four miles south and west to one mile north of York, which replaces the 867 levers dispersed over the eight previous frames. In all, the new signal box controls 33¼ miles of track in and around York and the 16 platforms of York station. Linking up with the existing colour light signalling (partly automatic) between Skelton box (1½ miles to the north) and Darlington South box, the new installation completes 44 miles of colour light signalling, the longest continuous section of its type in Britain.

Seventy-nine 3 or 4 aspect colour light signals have been installed, 74 of them controlled from the new box—though "box" hardly sounds suitable in the case of this installation. Of these, 65 are fitted with additional subsidiary signals and 43 with route indicators (junction-type, with rows of lunar-white lights, for high speed, and theatre-type for low-speed turnouts), while there are 154 subsidiary signals for shunting movements. As intermediate ground signals show horizontal red and white lights at danger, two white lights at 45 degrees when "off," all subsidiary signals *preceding* running signals must be pulled off before the main signal itself can be cleared. Subsidiary signals placed *beneath* running signals do not, however, show an "on" aspect, which is provided by the main signal. With 157 sets of points, operated by 277 point machines, of which the majority are electro-pneumatic, the layout provides 827 routes to be signalled—the largest number dealt with by one panel anywhere in the world. How such modern methods simplify matters for the operator may be judged from the fact that at the important Chaloners Whin Junction, diverging point of the London and Leeds main lines, an 80-lever box is now replaced by 12 route switches on the control panel, controlling no more than 5 signals.

From the maintenance staff, on the other hand, far more complex and skilled work seems to be demanded than in the old days. In the relay room adjoining the control cabin, the layman finds a staggering battery of meticulously ordered wires—over 400 miles of them altogether—serving over 1,000 interlocking and nearly 2,000 other relays; the majority of the lock relays have 108 terminals and the others between 22 and 28. Strange to think that many a man has been baffled to exasperation by a simple domestic fusebox!

The control console is designed for operation by a staff of four, whose activities are directed and coordinated by a Traffic Regulator seated at a desk

apart from and facing the panel. As can be seen from the illustration, the console is divided into four sections, so angled to each other that any of the operators can survey the whole of the diagram above. The switches, red for main signals and white for subsidiary signals, are grouped on the console at points as nearly as possibly below their actual location on the diagram above, and each group is labelled with the number and description of the route. Adjacent indicator lamps denote the aspect of the signals by appropriate colours. Above the route switches, which set up a defined road of anything up to 1,500 yards in length, are individual switches for the points each incorporates, enabling them to be operated separately as required; each point switch is flanked by indicator lamps showing whether it is set normal or reverse, and a third light flashes in the event of a point failing to respond, even if the failure is of no more than a few seconds' duration.

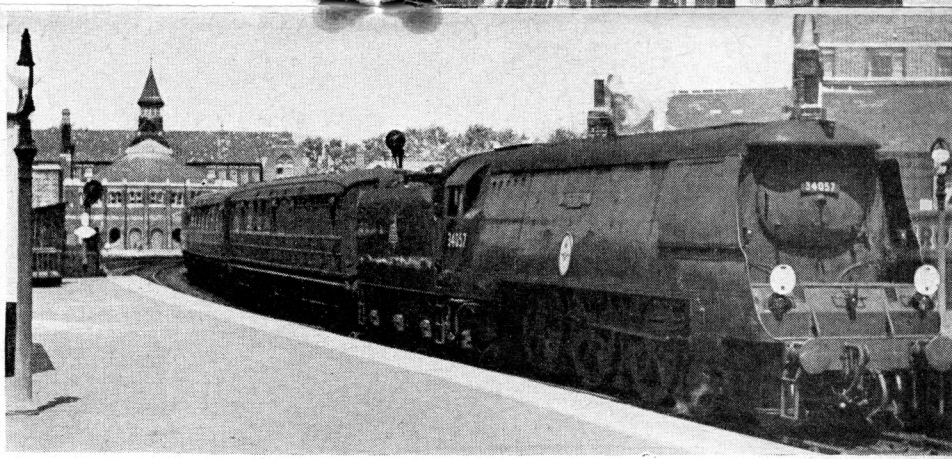
On the great diagram above, individual track circuits are represented by distinctive colours, each section terminated by red lamps which are illuminated to indicate occupation of the section. When a route is set up by manipulation of switches on the console, an appropriate row of white lights is illuminated on the diagram from the signal guarding the route to the extremity of the route and is not extinguished until the switch has been restored to normal. However, since the majority of these route lights are not illuminated unless the relevant switch is set to the "reverse" (as opposed to "normal") position, lamps at every pair of points detect their position continuously, so that the operator can always observe the position of points in a route at a glance, and attempts to set up conflicting routes are avoided. A novel indication on the diagram is a "Train Ready to Start" indication, illuminated when a plunger is depressed by staff on the station, and not extinguished till the appropriate signal is cleared. This diagram incorporates 5,416 miniature light bulbs for route indication and track occupation, with 150 more for telephone indication.

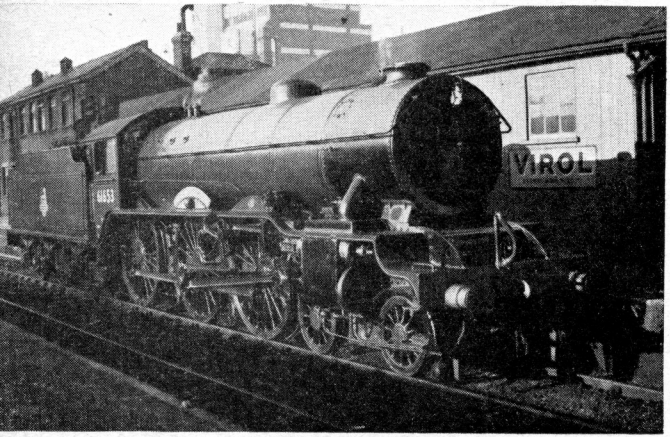
Where there are no intermediate subsidiary signals, the turning of a route switch on the console will move all points concerned to the correct position, providing that conflicting route relays are "normal," and that the track circuit and other controls are clear. After the points have moved, the relevant signals, their automatic controls having proved clear the track circuits in the route and those that foul it, and having detected the setting of the points they control, will assume the appropriate aspects and route indications, according to the route to be followed and the aspect of the signals ahead. In the case of electric point machines the whole sequence of events takes about 4½ seconds, with electro-pneumatic machines, just over two seconds. Where intermediate subsidiary signals are involved, a route is set up in stages, for the main signals will not clear until their preceding subsidiary signals are "off," thus proving all the track circuits clear. This is necessarily a longer procedure, but there are few routes incorporating three or more preceding subsidiary signals. That from the down Leeds main to the up main, however, is a complicated route from the south end of the station cutting across the complicated layout to a point nearly at the north end of platforms 8 and 9, with five subsidiary signals to set, 21 pairs of points and track circuits to detect, set and prove, and 130 other routes to lock normal; yet the whole sequence lasts no more than 9 seconds from the turning of a switch on the console!

The comprehensive train describer apparatus positioned above the diagram and linked to the six adjacent boxes, is also unique. Instead of indicating merely the order of approaching trains, the display has been so arranged that the information giving the class and destination of the train is illuminated in a panel indicating the actual signal which the particular train is approaching, the indication moving forward in step with the movement of the train to which it refers. Once the description of the train has been set up as it enters the section, on the lines described in a recent article, the apparatus works automatically and the description moves on down the panels in accordance with switch movement on the console and the passage of the train over certain track circuits.

This great work has been under way since after the last war, commencing with the installation of power-operated points. The first complete changeover took place on April 18th last, when the old Chaloners Whin and South Points boxes were dispensed with. On May 20-1, the new box took over from Platform, Waterworks, Leeman Road, Clifton and Locomotive Yard boxes. The last-mentioned, with 295 levers, was the largest mechanical box in the world; in the following week it was demolished and new connections were laid to Nos. 15 and 16 platforms, which became through roads on May 27th, so that there are now 5 through platforms able to cater for the heaviest East Coast expresses.

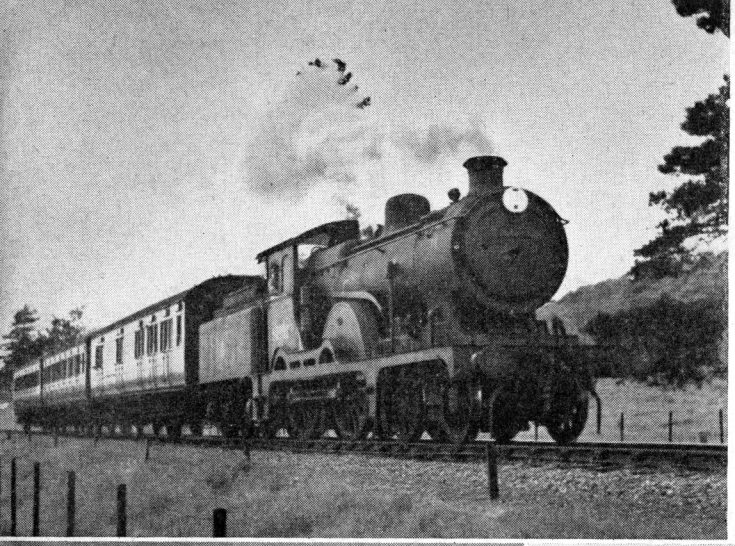
[*Concluded on p.* 274





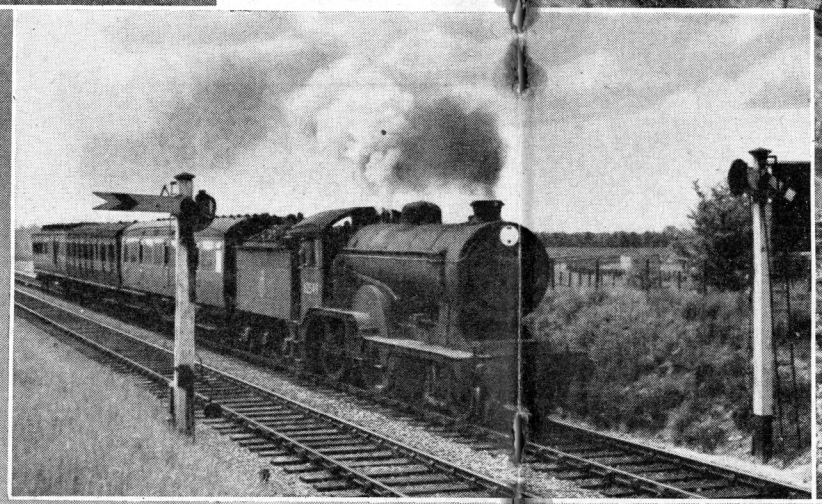
ANCIENT & MODERN IN EAST ANGLIA

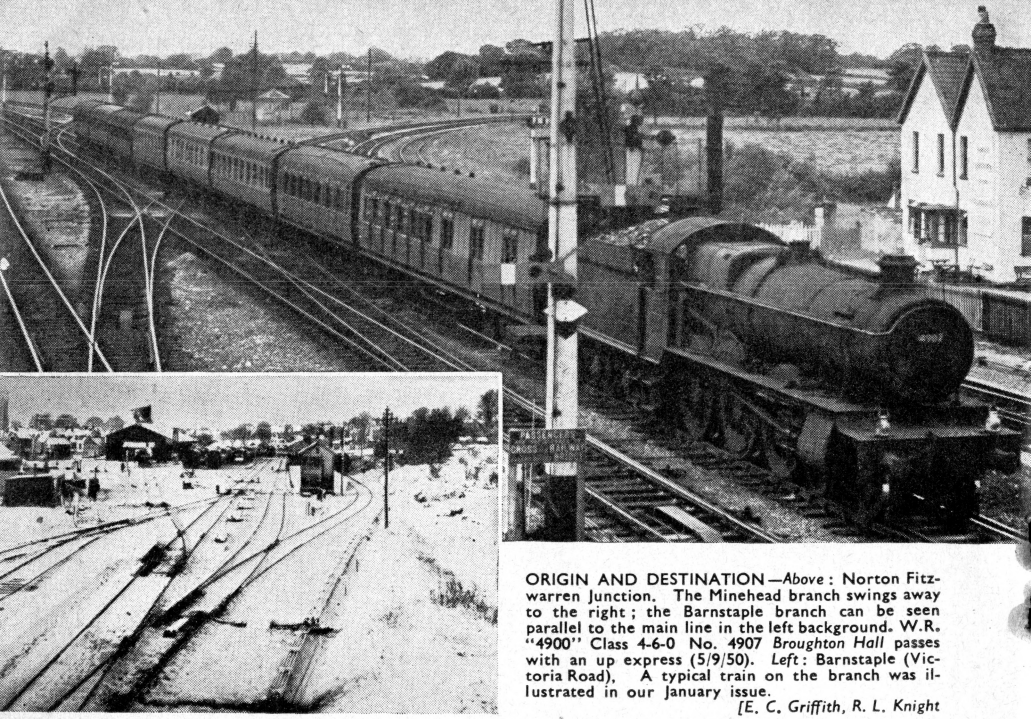
Top left : Class "B1" 4-6-0 No. 61270 emerges from Ipswich tunnel on a dynamometer car trial with the up "East Anglian" (11/6/51). See also page 284. *Top right* : S.R. Pacific No. 34057 *Biggin Hill* heads the 7.35 a.m. Yarmouth (Vauxhall)-Liverpool St. express through Hackney Downs Junction (11/6/51). *Bottom left* : Now spare royal engine at Cambridge, Class "B17" 4-6-0 No. 61653 *Huddersfield Town*, seen at Kings Cross (25/5/51), has been fitted at Doncaster with a "K3"-type chimney. *Bottom right* : Class "C12" 4-4-2T No. 7367 sets off from Audley End with the 12.15 p.m. train to Saffron Walden. *[H. N. James, R. E. Vincent (2), J. F. Aylard*



ANCIENT AND MODERN IN EAST ANGLIA — *Left* : Class "D15" 4-4-0 No. 62502 with a Kings Lynn-Hunstanton train near Snettisham (23/5/51). *Right* : Class "K3" 2-6-0 No. 61830 climbs to Stanway summit, near Colchester, with an up Clacton train (20/5/51). *Inset below* : Class "D16/3" 4-4-0 No. 62549 at Chippenham Jcn., Newmarket, with the 2.18 p.m. Newmarket-Bury St. Edmunds train (26/5/51). Note the repeater signal behind the sighting board, extreme right. *Bottom left* : Class "J15" 0-6-0 No. 65459 on the afternoon Haughley-Laxfield train near Athelington (26/5/51). *Bottom right* : Class "7MT" 4-6-2 No. 70011 *Hotspur*, probably "running in" from Crewe to Norwich, with an up freight between Brandon and Thetford.

[P. M. Alexander





ORIGIN AND DESTINATION—*Above*: Norton Fitzwarren Junction. The Minehead branch swings away to the right; the Barnstaple branch can be seen parallel to the main line in the left background. W.R. "4900" Class 4-6-0 No. 4907 *Broughton Hall* passes with an up express (5/9/50). *Left*: Barnstaple (Victoria Road). A typical train on the branch was illustrated in our January issue.
[E. C. Griffith, R. L. Knight

THE TAUNTON—BARNSTAPLE

BRANCH, WESTERN REGION

by P. W. B. Semmens, B.A.

THE Devon and Somerset Railway was authorised in the session of 1864 to construct a broad gauge line from Barnstaple to a point near Taunton on the Bristol and Exeter main line. Construction was started in the following year, but progress was slow, and by the summer of 1871, no more than the 7½ miles from Watchet Junction (now Norton Fitzwarren) to Wiveliscombe had been completed. The whole line was not opened until November 1st, 1873. By contrast, when the decision was taken to reduce the gauge, less than eight years after the opening, the conversion of the whole 42¾ miles took less than three days.

Except for passing loops at every station, between Norton Fitzwarren and Milverton, the first station on the branch, and over a short section between Dulverton and Morebath Junction, the branch was, and still is, single track. It runs close to the southern edge of Exmoor, crossing the Exe near Dulverton. Gradients are steep for most of the way, but there are only five major engineering works, three tunnels (the longest a bare quarter of a mile long) and two high viaducts. Speeds are limited to 60 m.p.h. throughout the line—which, incidentally, is always marked on Western Region maps with as thick a line as that used for the trunk route to Penzance and Birmingham!—and there are numerous and more severe restrictions due to curvature and other reasons.

The majority of the branch trains start from one of the down bays at Taunton. The only through trains to use this route are summer Saturday services between Ilfracombe and London, Preston (both down), Cardiff (up) and Birmingham (up), the latter a new train introduced this year. These are the only trains that do not stop at each of the thirteen intermediate stations and halts. Before the War, some of the locomotives that normally worked over the line were fitted with automatic tablet-exchange apparatus, for which there are sets of equipment at each station, for use on these non-stop trains. At the Barnstaple end of the line, there is a fair amount of through summer working over ex-S.R. metals to Ilfracombe.

From Taunton to Norton Fitzwarren, the main line is quadrupled, and beyond the latter station there is the double junction by which the main line to the West leaves the Barnstaple and Minehead branches. The Barnstaple branch runs almost parallel with the main line

for a short distance, but the Minehead line curves sharply away to the north to pass between Exmoor and the Quantocks, reaching the coast at Watchet. At Norton Fitzwarren the countryside changes character, the unbroken Vale of Taunton Deane giving place to more hilly country. For many centuries much effort has been expended in draining the Vale, but even today it is not infrequent for the railway embankment to be the only dry land in sight at some points.

The line rises gently to Milverton, which marks the beginning of the single track. Beyond, the gradient is steeper to the summit at Venn Cross, 7¾ miles further on. Passing Wiveliscombe the line makes a horse-shoe bend about a mile across, keeping at approximately the same level on the side of the hills.

Between Wiveliscombe and Venn Cross are two tunnels. The first is Bathealton tunnel, beyond which lies Tone viaduct, the first of the two high structures on the branch. It consists of a T-shaped wrought iron lattice girder supported on masonry piers, 101 feet above the river of the same name. This viaduct, together with the one at Castle Hill, forms the main limiting factor on the line. Only "uncoloured" and "yellow" locomotives, as well as "blue" engines of the "4300" and "Bulldog" classes, are allowed west of Wiveliscombe. Even so, the 2-6-0 locomotives are restricted to 15 m.p.h. over the viaducts, compared with the general limit of 25 m.p.h. for other types. Since the War, some tests have been carried out with "Hall" class locomotives on these viaducts, but it was not found possible to raise the permitted weight so much.

The second tunnel is situated just to the east of Venn Cross station, the summit of the line. In the reverse direction, the gradient is with the train all the way to Wiveliscombe. Receiving the "right away" on one occasion, the driver of my train merely took off the brake; after a painfully slow start, brakes had to be applied later to keep the speed within the overall limit! For the 4¼ miles we took 7 minutes 58 seconds.

From Venn Cross the line drops down through Morebath and Morebath Junction Halt to the level of the Exe valley at Dulverton, 6¾ miles further on; and just to the east of the station the river is crossed by a low bridge. East of Morebath Junction Halt, the Exe Valley line from Exeter and Tiverton joins our branch. A push-pull train for Exeter, worked by a "1400" Class 0-4-2 tank, usually connects with the Barnstaple train at Dulverton, the largest of the intermediate stations on the line and approximately the halfway point.

The second climb of the journey is not quite so well defined as that over the first gable; it is from Dulverton, through East Anstey, Yeo Mill Halt, Bishops Nympton and Molland to South Molton. At one time a curious practice used to prevail at South Molton. Up trains not booked to pass down trains at this station used the down platform, which is admittedly far more convenient, for the up platform is bare, with all the station buildings on the other side.

To the west of South Molton lies Castle Hill, the ancestral home of the Fortescue family, the Lord Lieutenants of Devon. Owing to opposition from the family when the Devon and Somerset was authorised, it had to be built out of sight of the house. Consequently, the route chosen is by no means the best possible; one result is that the station at South Molton is a good mile from the town. The final tunnel on the line lies on this stretch, and, as at Tone, closely precedes a viaduct. The style of the latter is similar to that at Tone; it is 232 yds. long and 94 ft. high above the valley of the Bray. Filleigh Station (once known as Castle Hill) lies in a deep cutting behind the estate. From Filleigh the line continues gently downwards to Swimbridge. This portion of the line is at its best during the spring, when for almost the whole way between Dulverton and Barnstaple, the cuttings and embankments are ablaze with primroses in bloom.

Apart from one very short portion of adverse grading, the line continues steadily downhill from Swimbridge to Barnstaple, much of it at 1 in 60. Up trains are faced with this bank immediately they leave Barnstaple, and even though loads are usually light, progress is slow up the 1 in 60. From a westbound train waiting at Swimbridge to cross, the efforts of an approaching engine in the opposite direction can be heard long before it appears. For some 200 yds. near m.p. 205¾ (measured from Paddington via Bristol) the gradient changes suddenly to 1 in 55 down, before resuming a more gentle climb. Drivers rarely seem to make any alteration in the controls for this dip, with the result that acceleration is extremely rapid for a while. As an example, with a load of 80 tons, 2-6-0 No. 7314 climbed the 1 in 60 at a steady 23 m.p.h., but *averaged* 45 m.p.h. over the half mile between mileposts 205¾ and 205¼ on one of my journeys.

Barnstaple (Victoria Road) station consists of a long single-sided platform with a small bay. The majority of trains use the main platform, which is provided with a loop to enable locomotives to run

round their trains. Most of the services are worked to or from the Junction station at Barnstaple, to connect with services over the Ilfracombe and Torrington lines. Engines are rarely changed at Barnstaple, and are required to work chimney first between there and Taunton; they are turned on the Junction station turntable. The ex-G.W.R. shed at Victoria Road was closed at the beginning of 1951, and servicing is done at the ex-S.R. shed at Barnstaple Junction.

There is a spur at Barnstaple Junction to enable through trains to run direct on to the Southern line, but it has been out of action since early in the war, so making it unnecessary to man a signal-box and a ground frame. All the points controlled by these boxes are now clipped. During the war, some of the waste ground in the centre of the triangle was used for demonstrating various grenades and anti-tank bombs to the Home Guard.

The loop line between the railways, although only $1\frac{3}{4}$ miles long, contains four overbridges, and a viaduct over the Taw. A deep cutting carries the line through a residential part of the town, but at either end there are fairly high embankments. For the majority of its length, the gradient is falling at 1 in 80 towards the Junction station. In the summer, locomotives halted by the Junction starter seem to have no trouble in getting away with loads of 8 or 9 bogies on this gradient.

The Barnstaple branch is normally worked by standard 2-6-0s of the "6300" and "7300" classes, and 0-6-0s of the "2251" Class (all nowadays of Taunton sheds; the small shed at Barnstaple was not large enough to be allocated a separate code number), though 2-6-2 tanks are occasionally seen. Before the war, the line was one of the regular hunting-grounds of the "Bulldog" Class.

YORK SIGNALLING (*Concl. from p. 268*)

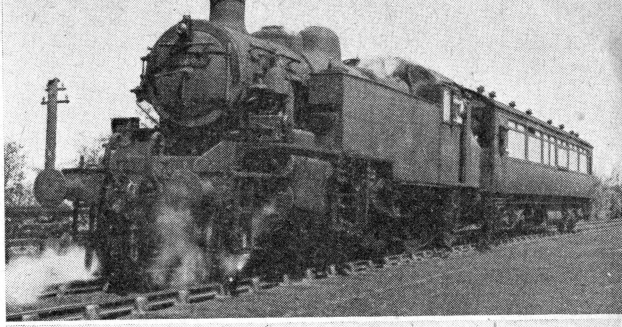
The Westinghouse Brake & Signal Co., chief contractors at York, are now undertaking the £300,000 job of resignalling Euston, which will become the first main-line London terminus to have electro-pneumatic points, for 100 sets of them are to be installed. A 227-lever all-electric power frame, built some years ago and stored during the war, will be put into operation, and the L.M.R. will provide 34 colour-light and 36 ground signals.

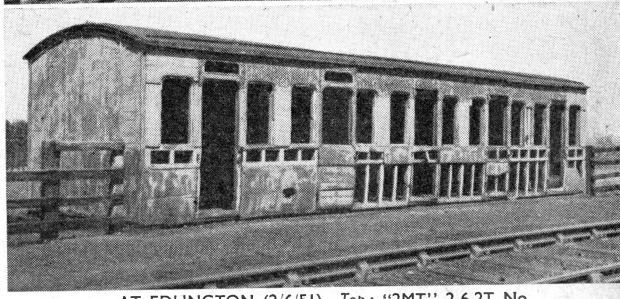
NEW "FIVES"—*Below*: New standard "5MT" 4-6-0 No. 73003 pulls out of Melton Mowbray with the 12.10 p.m. Peterborough (East)-Leicester (London Road) (13/6/51). *Inset*: The last L.M.R. Caprotti Class "5MT" 4-6-0 No. 44687, at Crewe (2/6/51). *[A. F. Taylor, W. H. Whitworth*

THE

DEARNE VALLEY PUSH-AND-PULL

By GEOFFREY OATES





AT EDLINGTON (2/6/51)—*Top*: "2MT" 2-6-2T No. 41283 and the auto train. *Bottom*: The "Station buildings"! *[G. Oates*

A RATHER disreputable but interesting railway service, withdrawn on June 9th, 1951, was the push-and-pull train linking Wakefield (Kirkgate) and Edlington (for Balby), 3½ miles south-west of Doncaster. It traversed the erstwhile Dearne Valley Railway, now part of the L.M.R., which runs through busy colliery districts in South Yorkshire. At the end the service comprised two trains each way from Wakefield to Edlington throughout, with two more trains from Wakefield as far as Goldthorpe and Thurnscoe, an intermediate halt, one of which was extended to Edlington on Saturdays, when the service was further supplemented by two extra return workings to Edlington.

The train served seven halts—a generous description, possibly, for each offered nothing more than a wooden platform, the length of about two coaches and some six inches high. Each halt was dignified by a shelter converted from an old railway carriage, all in a decrepit condition and far from weatherproof. The halts were not staffed and the whole system appeared poverty-stricken; it seems very doubtful if passenger services were ever flourishing.

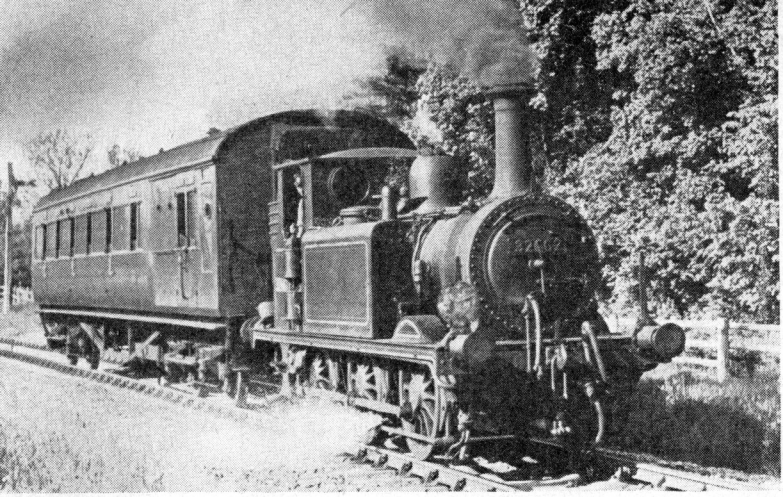
One Saturday shortly before closure I went down to Edlington to sample the service. On arrival from Wakefield, the push-and-pull ran through the station to the signal box beyond to exchange tablets, as the line is only single track. For my journey a push-and-pull fitted Ivatt 2-6-2 tank, No. 41283, was the motive power for an ancient L. & Y. saloon. As the train drew to a standstill at the halt and I prepared to clamber up to the coach from the low platform, some steps folded beneath the door suddenly opened out. Once aboard the carriage, I discovered that the steps, of which there is a set for each of the four doors, were worked by vacuum, with a separate control handle for each door. My sole companions at the start of the trip turned out to be a railfan from Wakefield and the guard-cum-conductor, who collected fares and issued tickets to all passengers picked up en route.

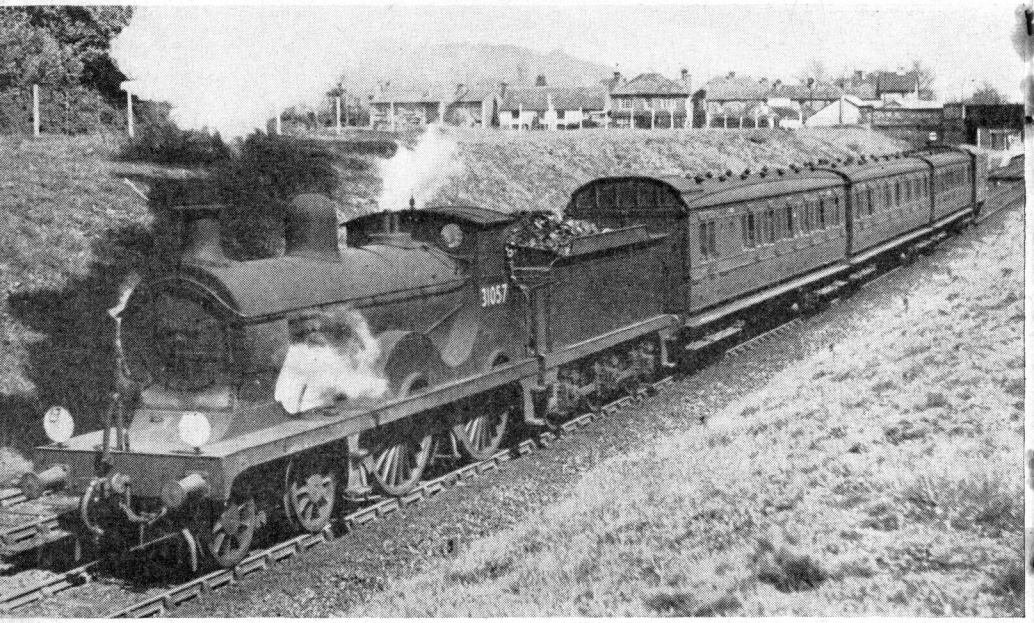
The push-and-pull was no flyer, for it was allowed 62 minutes for the 20¼ miles, including stops, and unfortunately a goods train travelling ahead of us made the second half of the run more lethargic still. Twenty minutes were lost waiting for signals, but despite this setback we arrived at Wakefield only 16 minutes late. We set off promptly from Edlington and were soon traversing a very high and impressive viaduct over the River Don at Conisborough, with an excellent view of the castle, which was chosen by Sir Walter Scott for one of the principal scenes of "Ivanhoe." Before Denaby Halt, closed for passengers since 1949, the train ran under the Sprotborough-Shireoaks and Doncaster-Sheffield lines, then bridged the Hull-Aire Jcn.-Mexborough route. It was now in the Dearne Valley proper, and the track hugged the bank of the small river for about two miles. After Harlington halt, which we passed without stopping, the line became double track, and proceeded beneath the old Swinton and Knottingley Joint line of the L.M.S. and L.N.E.R., to which it is linked by a spur. Just before this junction stands Goldthorpe and Thurnscoe halt, which we reached with seven minutes to spare, so that the conductor was able to shout an encouraging "Plenty of time!" to a lady running for the train.

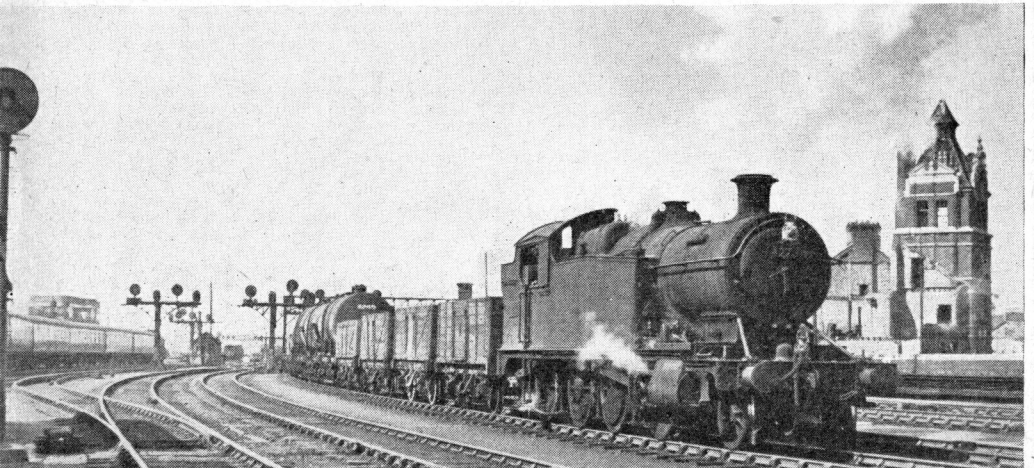
Our load increased by two passengers, we were again two minutes ahead of time at the next halt, Great Houghton, which was bare of passengers. About two miles further on, at Grimethorpe Colliery sidings, adverse signals stopped the train for four minutes, which the engine used to advantage by taking water. Eventually we passed the empty Grimethorpe halt at low speed, two minutes late, but after threading a very short tunnel we were halted once more at Shafton Junction, and it was two minutes before the signal cleared. It was here that the former Hull and Barnsley line, which bridges our line, made physical connection with the Dearne Valley Railway, over which it enjoyed running powers.

We arrived at Ryhill, the last halt of the route, three minutes late, and were joined by five adults and two children. Adverse signals kept us waiting for 12 minutes, and there was a further two-minute delay at Wintersett, about half-a-mile further on. Crossing the E.R. Doncaster-Leeds main line, we reached Crofton Junction, where the Dearne Valley section terminated and were able at last to pass the offending goods train, which was in the sidings. Our route made a triangular junction with the ex-L. & Y. route from Goole, and there is a spur to the ex-L.M.S. Sheffield-Leeds line above at this point. At Wakefield sheds (26A) we came to another halt, this time to pick up four railwaymen, and then drew up in Kirkgate station at 3.31 p.m.

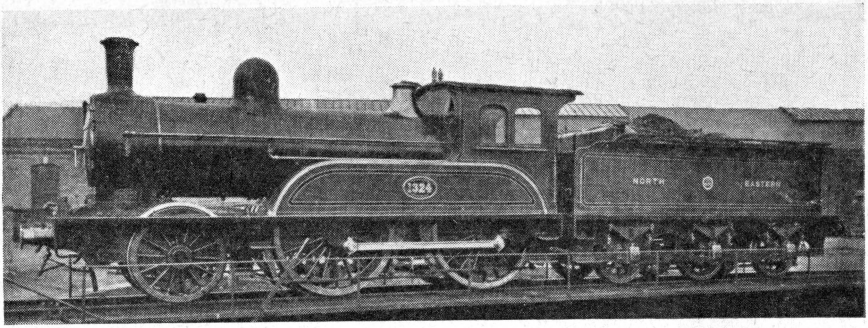
The area we had covered, not particularly picturesque, consisted mainly of colliery districts and there were many short branches en route serving the nearby pits. The line, graded quite steeply, deals with a moderate volume of freight traffic, and owing to the danger of colliery subsidence, speeds rarely exceed 40 m.p.h., but obviously the passenger service could have been accelerated. It is not surprising, therefore, to find the service withdrawn, particularly as the trains were so infrequent and the fares so high; the so-called "cheap day return" from Edlington to Wakefield cost 5s. 6d., whilst the single fare was 4s. 3d., yet the E.R. charged no more than 2s. 6d. for a "cheap day return" from Doncaster to Wakefield (Westgate), a journey of speed, comfort and convenience far above the Dearne Valley push-and-pull standards.







A MIXED BAG—*Left*: S.R. Class "AIX" 0-6-0T No. 32662 approaching Langstone with the 5.33 p.m. Havant - Hayling Island train (1/6/51). *Centre*: S.R. Class "D" 4-4-0 No. 31057 leaves Shalford with the 1.50 p.m. Reading - Redhill train (2/5/50). *Bottom*: W.R. "4200" Class 2-8-0T No. 4270 enters Cardiff General Station with an up freight (3/4/51). *[R.E. Vincent, E. C. Griffith, J. N. Westwood*



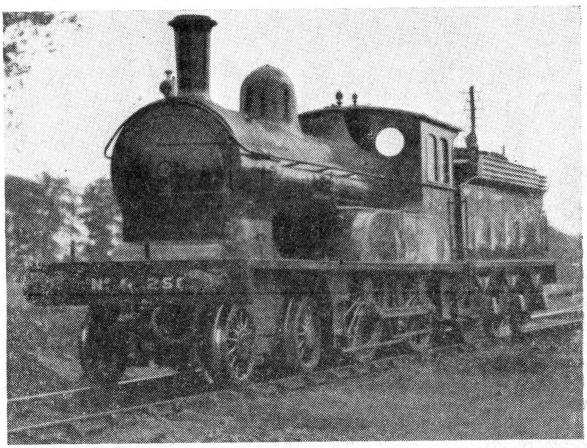
THE

WORSDELL 4-4-0s OF THE N.E.R.

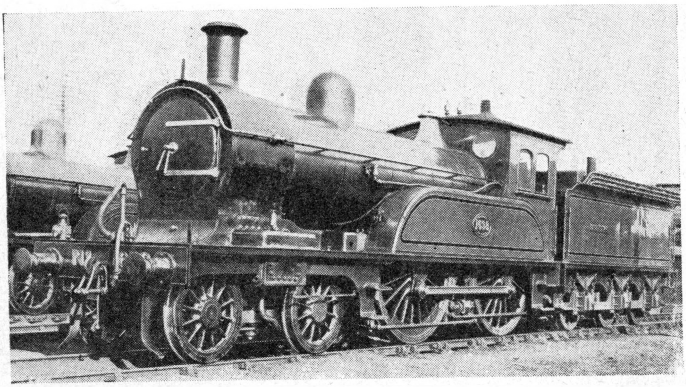
By K. Hoole

PART ONE

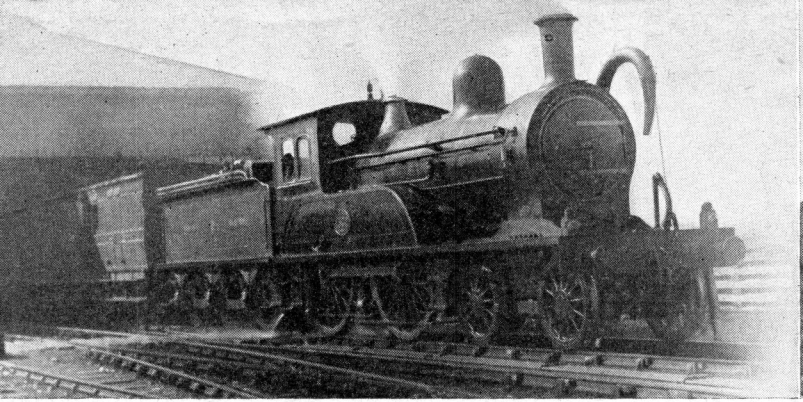
AT the grouping on January 1st, 1923, the North Eastern Railway possessed the largest number of 4-4-0s, 186 in all, of any of the companies which went to form the L.N.E.R. Of the 186, there were only six not designed by one of the Worsdell brothers—Thomas W., who was Chief Mechanical Engineer of the N.E.R. from 1885 until 1890, or Wilson, who was C.M.E. from 1890 to 1910. Although 28 of these engines were built as compounds, all had been rebuilt as simples by the grouping, except for the sole representative of Class "3cc" (No. 1619). The Class "R1" engines alone lacked the familiar Worsdell continuous splasher over the coupled wheels, and all displayed their N.E. classification on the front buffer-beam until 1932, when Darlington began to substitute the L.N.E.R. classification. To-day, one class only survives, Class "R," now Class "D20," but recently it has been heavily attacked by scrapping.

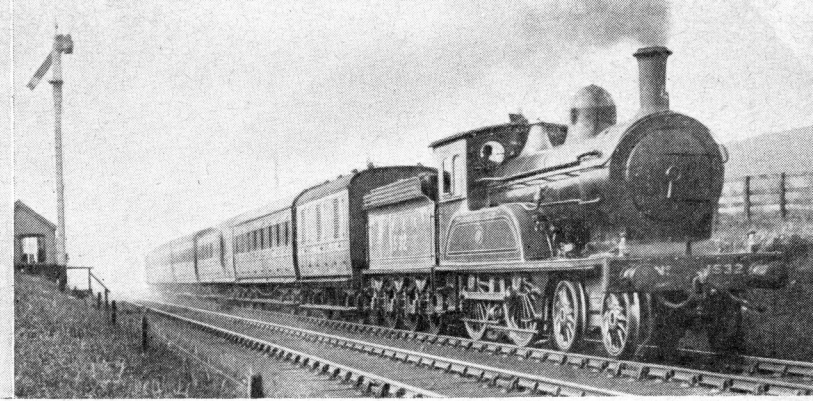


A peculiar feature of each class, except "R1," derived from the positioning of the Westinghouse brake pump between



Top: No. 1324, N.E. Class "D" 2-cylinder compound 2-4-0, later rebuilt to Class "F" 4-4-0. *Centre*: No. 258, L.N.E.R Class "D23" formerly N.E.R. Class "G" *Left*: No. 1638, N.E.R. Class "M1" 4-4-0, as built with outside steam chests and extended smokebox. *[F. Moore, C. J. L. Romanes*

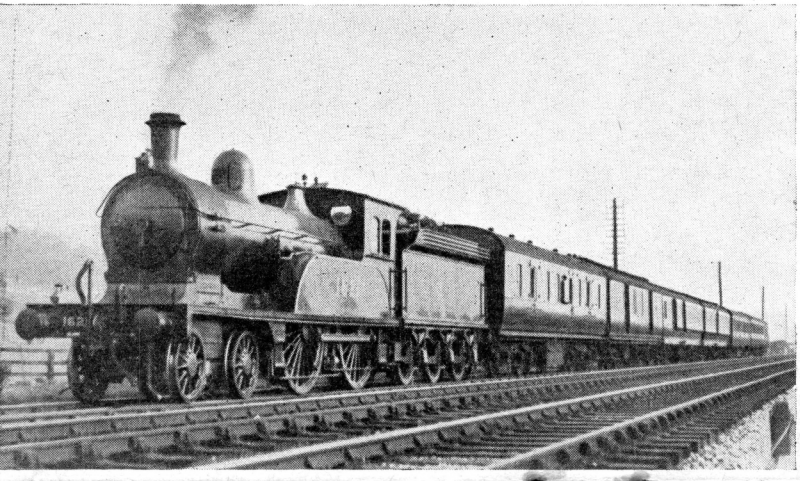


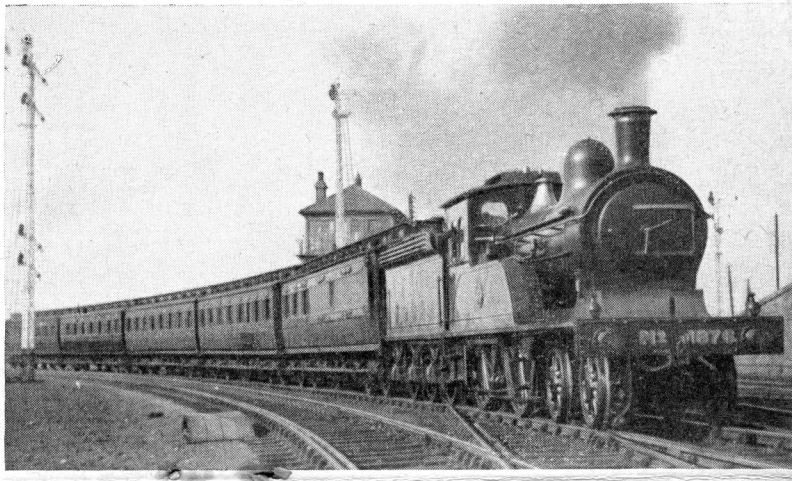


THE WORSDELL 4-4-0S

Top left : N.E. Class "F" 4-4-0 No. 1532 at Filey in 1894. It was then a 2-cylinder compound, and the changeover valve, enabling the engine to be started as a 2-cylinder simple, is visible on the smokebox. *Top right* : The same engine, by the date of this picture L.N.E.R. Class "D22", heads a Scarborough-York express between Scarborough and Seames. *Bottom left* : As L.N.E.R. Class "D17/1", N.E.R. Class "M" 4-4-0 No. 1621, now preserved at York Museum, heads a down mail train near Low Fell in 1929. *Bottom right* : No. 1876, a "Q" Class 4-4-0, leaves King Edward bridge, Gateshead, with a Newcastle-York express.

[H. G. Sheddon, F. R. Hebron, P. Ransome-Wallis, R. J. Purves





the driving wheels on the right-hand side. The pump was accessible through an oval hole in the splasher on that side, covered by the large numberplate, which was hinged at the top. In L.N.E.R. days the latter was replaced by a piece of sheet metal of the same size similarly hinged at the top, bearing the small L.N.E.R. building-plate. When the engine number was transferred from the tender to the splashers from 1928 onwards the building-plate was removed, for some numerals then overlapped the hinged flap. On the Class "R1" engines the pump was located at the right-hand side of the smokebox.

Before dealing with each type in detail it may be as well to outline the N.E.R. method of classification. When T. W. Worsdell took office in 1885 he made his first design Class "A" (2-4-2T, L.N.E.R. Class "F8"), his second Class "B" (0-6-2T, L.N.E.R. Class "N8") and this scheme was perpetuated by Wilson Worsdell and Sir Vincent Raven right through the alphabet to Class "Z." Later development of the original class was shown by a figure appended to the class letter; thus Classes "S1," "S2" and "S3" were developments of Class "S" (L.N.E.R. "B14," "B15," "B16" and "B13" respectively). The three-cylinder compound No. 1619 was Class "3CC" and two four-cylinder compound Atlantics were Class "4CC." Classes which were in existence before T. W. Worsdell took office were known by the number of (usually) the first engine built; thus Class "901" denoted the Fletcher 2-4-0s (L.N.E.R. "E6"), whilst the famous "Tennants" were Class "1463" (L.N.E.R. "E5"). There were no letters of the alphabet left when Sir Vincent Raven's last design appeared, and so his Pacifics were made Class "4-6-2." His 4-4-4 tanks (L.N.E.R. "H1," now "A8") took the letter "D," which had become vacant with the rebuilding to Class "F" of the two 2-4-0s Nos. 340 and 1324, which were originally Class "D."

CLASS "F" (L.N.E.R. Class "D22").

Two of these engines were originally built as two-cylinder compound 2-4-0s of Class "D," No. 1324 in 1886 and No. 340 in 1888, the former with slide valves and the latter with piston valves, both with Joy's valve gear. They were the first express engines in Britain with large double window cabs, a feature of almost all N.E. and L.N.E.R. tender engines built since. Between the Class "Ds," in order of building, there were 10 4-4-0s, otherwise similar to the "Ds," followed by 10 simple 4-4-0s, of Classes "F" and "F1" respectively, all built in 1887. In 1890/1 a further 15 compound "F" 4-4-0s were added, making a total of 37 engines. After the conversion of Nos. 340 and 1324 to 4-4-0s, a start was made in 1899 to the conversion of the whole lot to Class "F" simple engines, with Stephenson's link motion and piston valves. They were later superheated, the official diagram being dated June 11th, 1909.

The individual numbers of the classes, with Gateshead building dates in brackets, were:

CLASS "D": 340 (1888), 1324 (1886).
CLASS "F": 1*, 18, 42, 115/7, 355, 514, 663/84, 779 (1887); 1532-41 (1890); 1542-6 (1891).
CLASS "FI": 85, 96, 154/94, 230, 673, 777, 803/8, 1137 (1887).
* Renumbered 356 in 1905.

Until the arrival of the "M," "Q" and "R" engines, when they were gradually relegated to secondary duties, particularly in the Hull and Scarborough areas, the "F1s" and "Fs" were the North Eastern's largest passenger engines and, naturally, they worked the most important main line turns. The last to be withdrawn, in November, 1935, was No. 1537. No. 18 was the first Worsdell 4-4-0 to go on grounds of age, in 1/29. In early 1888 trials were conducted between a compound "F" and a simple "F1" between Heaton Junction and Tweedmouth with a 160-ton train of 20 vehicles, from which the "F" emerged with considerably superior figures—28.3 lb. of coal per train mile as against the "F1's" 35.9 lb. (Incidentally, when new the Class "D" No. 1324 was reputed to have worked a newspaper train from Newcastle to Edinburgh, returning with a 20-coach express, on an average coal consumption per mile of 22½ lbs.). The "F" compounds carried a plate to the effect that they were compounds on the patent Worsdell von Borries system, as did No. 1619 until it was rebuilt as a Smith balanced compound in 1898.

To No. 663 stands the credit of the compulsory stop at Ryhope enforced on all down passenger trains after descending Seaton bank, on the Stockton-Sunderland line, to ensure that they are kept under proper control. On 19/8/89 the driver of No. 663 ignored a speed restriction over a curve at the foot of the hill and his train was derailed, fortunately without fatality. Since then Liverpool-Newcastle trains have been switched to the Seaham route, opened in April, 1905, but as recently as 10/10/50 they were back on the Seaton line because of engineering operations at West Hartlepool. Another "F," No. 117, is reputed to have run the 124½ miles from Newcastle to Edinburgh in 125 minutes during the 1888 races, but the official time was given as 129¾ minutes.

CLASS "G" (L.N.E.R. CLASS "D23").

These engines, the famous "Water-

burys," were built originally as 2-4-0s in 1887/8, to the designs of T. W. Worsdell; with slide valves and Joy's valve gear when built; they were fitted with piston valves and Stephenson's link motion when they were rebuilt as 4-4-0s from 1901 onwards, commencing with No. 521. From 1913, when No. 1107 was altered, they were superheated with extended smokeboxes and thereafter became very popular engines for light fast branch traffic: in fact, all their time has been spent on branch lines, particularly in the Hull, Leeds and Darlington districts. They were employed for a long time on the Darlington-Kirkby Stephen route over Stainmore Summit and, of the last five to be withdrawn, Nos. 223, 337 and 677 were at Darlington, with No. 678 at Kirkby Stephen, for working this route; they were the only N.E. 4-4-0s allowed on that section. The last of the class, No. 1120, ended its career working from Bradford to York, via Harrogate, and was the only L.N.E.R. engine allocated to Manningham L.M.S. shed, though its crew came under the supervision of Starbeck.

Individual N.E.R. numbers, with Darlington building dates, were:

1887: 23, 274, 557, 675—9.
1888: 214/7/22/3/58, 328/37/72, 472, 521, 1107/20.

CLASS "M" (L.N.E.R. CLASS "D17/1").

Twenty of this class were built at Gateshead Works in 1892-4 and one, No. 1629, lasted until September, 1945. No. 1621, withdrawn in July, 1945, was repainted in North Eastern colours and is now in the Railway Museum at York. The original arrangement of outside steam chests to inside cylinders did not prove satisfactory and the steam chests were altered to the normal position under the smokebox, commencing with No. 1623 in 1903. At the same time piston valves were substituted for the slide valves of Nos. 1620-38 (No. 1639 had been built with piston valves). On all of them the valves were operated by rocking shafts from Stephenson's link motion, the eccentrics of which were between the cranks on the driving axle. Their extended smoke-boxes were done away during these alterations, only to reappear at a later date and become standard when the class was superheated.

An outstanding feat is credited to an "M," No. 1620, which is supposed to have run the 124½ miles from Newcastle to Edinburgh in 112 minutes on the night of 21/22 August, 1895. However, that great recorder of the past, Mr. Rous-Marten, maintained that the time given for the last lap into Edinburgh was incorrect; in 1939, the scheduled time for the "Coronation" over the same stretch was no tighter than 120 minutes, and it was not until 1936 that Class "A4" 4-6-2 No. 2511 covered the distance in 114 minutes on a special test run.

For many inter-war years Bridlington housed a number of these engines, and eleven ended their career here. The normal allocation was five in winter and seven in summer, and as one was withdrawn another was transferred from Hull to take its place, though No. 1623 was withdrawn from Hull before getting to Bridlington. Selby had Nos. 1631/7 at that time and Alnmouth the remainder. No. 1629 remained at Bridlington until early in 1940, when it was transferred to Hull and subsequently to Neville Hill, Selby, Middlesbrough and Newport, where it finished its days. Whilst working from Middlesbrough No. 1629 was used on the coast road to Scarborough, up the 1 in 39 gradient to Ravenscar, with two coaches. At that time it was rumoured that No. 1621 was to be transferred from Alnmouth to Scarborough to keep it company, but no move took place.

There was much competition between crews at Bridlington for the best engine: those in the Hull link were double-manned, whilst the one engine in the Leeds link was manned by three sets of men. Without a doubt No. 1638 was the best of any of those at Hull, Bridlington or Selby—the writer cannot speak for those at Alnmouth. Even when 39 years old No. 1638 was timed to cover the 11¼ miles between Driffield and Beverley (pass to pass) in 9¾ min. on six bogies. The 31 miles from Bridlington to Hull were covered in 34½ min., against a schedule of 37 min. The riding and steaming qualities of this engine were always better than the others and after the run mentioned above a local newspaper gave the engine the name "Flying Yorkshireman." In September, 1933, I chanced to be on the footplate of No. 1634, Bridlington's spare engine at the time, which was being used in place of No. 1630, "stopped" at Hull Dairycoates. My driver was one of 1630's regular drivers and I can still recall his stream of abuse at a Hull driver, who suddenly appeared with his pet 1630, on an evening excursion from Hull, its smokebox and smokebox door red hot, and with steam blowing from every possible place.

During the British Empire Exhibition at Wembley in 1924/5 these engines took their turn running through to London on specials and No. 1630 was noted at King's Cross on 9/8/24. However, London had seen this class many years before that because No. 1622 worked through from York with an excursion from Edinburgh on 14/7/1900. No. 1620 took part in the Stockton & Darlington 1925 Centenary Procession.

When new, the average coal consumption of the "M" class was given as 33.3 lb. per mile, and that of No. 1639 alone as 29 lb. per mile. In 1896 trials were carried out between Newcastle and Tweedmouth with five classes of engines, Fletcher 2-4-0 No. 902; Tennant 2-4-0 No. 1475; a Worsdell 4-2-2 of Class "J"; Class "M" 4-4-0 No. 1635 and Class "Q1" 4-4-0 No. 1869. In all cases the load was 186½ tons and the lowest coal consumption was with No. 1635 (37.26 lb. per mile), with No. 1869 next (37.33 lb. per mile) and the 4-2-2 last (43.35 lb. per mile). Over the double journey No. 1635 gained 30 seconds, whilst the others all lost time, ranging from 6 secs. by the 4-2-2 to 13 min. 40 sec. with the Tennant 2-4-0.

Individual numbers and Gateshead building dates were:

1892 : 1620 **1893 :** 1621-38. **1894:** 1639.

CLASS "Q" (L.N.E.R. CLASS "D17/2").

This class was very similar to the preceding one apart from a smaller heating surface and the fact that they were built with steam chests normally placed, and slide valves with link motion. They were built at Gateshead in 1896/7 and could be distinguished by their clerestory roofed cabs, although the engines that survived the 1939-45 war lost theirs in 1943. When new they boasted brass-capped chimneys and short smokeboxes, but were later fitted with extended smokeboxes on superheating, together with piston valves.

The "Qs" never appeared to be such good performers as the "Ms," and I had plenty of chances to compare their work during four years of almost daily travelling between Bridlington and Hull. Yet Mr. Rous-Marten once timed No. 1872 over the 44.1 miles from Darlington to York, in 40 min. start to stop, and records exist of an exploit by No. 1904 in which the 42 miles from York to Scarborough were reeled off in 41 min.

In their first few years the "Qs" worked the main express trains between York and Edinburgh, but they were soon replaced by the Class "R" 4-4-0s which appeared three years later. The arrival of the Atlantics ousted the "Qs" from the main line altogether and they were dispatched to Hull Botanic Gardens, Leeds Neville Hill, Scarborough, West Hartlepool and Carlisle sheds. In 1934/5, new "D49s" edged out the "Qs" once more, and new travels took some of them to such sheds as Bradford, Duns, Haymarket, St. Margarets, Hawick, Alnmouth and York, until they were finally withdrawn. The last two—Nos. 1873 and 1902—managed to last until February, 1948, when they were both withdrawn from York.

The engine allocated to Bradford was stationed at the Manningham shed of the L.M.S.R. and worked to York via Harrogate daily. No. 1903 was the first to go there, in 1935, and was subsequently replaced by Nos. 1908 and 1925 of the same class. In 1927 Nos. 1880, 1927/9 were on loan to the G.E. Section of the L.N.E.R.; working from Cambridge shed, they appeared at Liverpool Street on the 2.48 p.m. down stopping passenger. As long ago as June, 1900, No. 1875 worked through to King's Cross on a troop special.

No. 1929 at one time was fitted with a water-tube firebox designed by Mr. W. M. Smith, of compound fame. Like the other N.E. 4-4-0s it was fitted with piston valves during Mr. Worsdell's term of office and superheated after Mr. Vincent Raven became C.M.E.

Building dates and numbers were:

1896 : Nos. 1871-80. **1897 :** Nos. 1901-10/21-30

WITHDRAWAL DATES OF ENGINES DESCRIBED IN THIS INSTALMENT

1927: 96, 1628. 1929. 18. 23, 117, 514, 1137, 1534/40/4. 1930: 42, 154/94, 214/22/30/74, 340/55/72, 472, 521, 675/6/84, 779, 803/8, 1107, 1532/9. 1931: 217/58, 328, 557, 679, 1533/6/45, 1635, 1875, 1926. 1932: 1, 85, 663, 1543, 1623/5, 1922/7/8. 1933: 115, 223, 337, 673/7/8, 1324, 1535/8/42, 1627/30, 1872/80, 1930. 1934: 1541, 1620/6/31/3/9, 1878. 1935: 777, 1120, 1537/46, 1622/34/7. 1936: 1903. 1937: 1632/8, 1909/24. 1938. 1624/36, 1874/7, 1904/6/7/8/10/23/5/9. 1939: 1879. 1943: 1876, 1905/21. 1944: 1871. 1945: 1621/9. 1948: 1873, 1902.

DIMENSIONS OF ENGINES DESCRIBED IN THIS INSTALMENT

N.E.R. Class	Driving Wheel Diam. ft.	in.	Cylinders in.	in.	Tract. Effort at 85% b.p. lb.	Wt. T. cwt.	Grate Area sq. ft.	Heating Surface (sq. ft.) Fire-box	Tubes and Flues	Super-heater	Total	Boiler Press.	Barrel Diam. ft.	in.	Tube Length ft.	in.
D†	6	8½	18×24	26×24*	14,130	43.6	17.33	112	1,211	—	1,323	170	4	6	10	11
F	6	8½	18×24	26×24*	14,130	47.11	17.33	112	1,211	—	1,323	170	4	6	10	11
F1	6	8½	18×24		11,530	45.19	17.33	112	1,211	—	1,323	140	4	6	10	11
F‡	6	8	18×24		13,220	48.2	17.3	112	795	263	1,170	160	4	6	10	11
G†	6	1½	17×24		12,880	40.5	15.2	98	994	—	1,092	160	4	3	10	7
G	6	1½	18×24		14,430	44.7	15.2	98	994	—	1,092	160	4	3	10	7
G‡	6	1½	18×24		14,430	45.10	15.16	98	728	270	1,096	160	4	3	10	7
M	7	1½	19×26		16,845	50.14	19.6	121	1,220	—	1,341	180	4	4	11	10
M‡	7	1½	19×26		14,975	52.10	19.8	123	791	183	1,097	160	4	4	11	10
Q	7	1¼	19½×26		17,250	49.9	19.75	123	1,089	—	1,212	175	4	4	11	10
Q‡	7	1¼	19×26		14,975	50.2	19.8	123	791	204	1,118	160	4	4	11	10

*Low pressure cyl. †As 2-4-0. ‡Superheated.

TRAIN TOPICS

New Euston Arrival Bureau

The new arrival bureau at Euston, an imposing modern-style building on the site of the former George Hotel, was opened by Mr. John Elliot on June 18th last. In place of the cramped open-air pews and antiquated indicator now dismantled, people awaiting incoming friends can relax in one of the 92 tip-up seats in the spacious new hall, just within the arrival side of the station, to keep watch on the great screen occupying one wall of the building. If they are late, they can take in the whole of the same screen at a glance through the long curved, non-reflecting window in the opposite wall, without bothering to go inside. The screen is divided into twelve panels, on to which 12 lanterns project from a gallery at the rear, out of sight of the public. Every main line train due in Euston has its own slide, listing its arrival time and the principal towns it serves; at the appropriate time a triple carrier, taking the train slide, a small slide advertising its arrival platform and another its lateness or otherwise at the last reporting point it has passed, is inserted in one of the lanterns and projected on to a panel. The progress of trains from Rugby southwards is constantly available from a nearby teleprinter room, and there is telephonic communication with the signalbox to verify platform allocation.

Other L.M.R. stations in the current news are Liverpool (Lime Street), where the concourse is to be modernised with concealed lighting, one centralised glass-fronted booking office, a new refreshment room and shops; and Carpenders Park, on the Euston-Watford electric line, where a completely new station will be built to serve the new L.C.C. housing estate.

Society Rail Tours

Three further tours of lines normally closed to passenger traffic have recently been organised by the railway societies. On 26/5/51, the Stephenson Society, Midland Area, traversed lines in South Staffordshire in a four-coach push-and-pull set "sandwiching" an Ivatt "2MT" 2-6-2 tank. Their route took them over the ex-L.N.W.R. Darlaston and Princes End (Wednesbury-Tipton) branches, and the ex-M.R. Wolverhampton-Walsall line and Brownhills branch, from Aldridge. Earlier, on 28/4/51, the same Society's Scottish area enjoyed a run in four L.M. corridors, powered by spotless Class "D34" 4-4-0 No. 62471, from South Queensferry to Glencorse, via Kirkliston, Gorgie and the suburban line, avoiding Waverley, to which the train later returned with No. 62471 running tender first. On 16/6/51 the R.C.T.S. toured the Nottingham area in a four coach train behind "C12" 4-4-2 tank No. 67363, one of the two locomotives of this type stationed at Annesley to work the "Dido"—a local workman's train. The train ran from Victoria station (Nottingham) to Daybrook via Netherfield, then reversed down the one-time Nottingham Suburban line to Thorneywood; next it retraced its steps to Daybrook and ran on to Bestwood, before setting out for the final "leg" of its trip, to Ilkeston and the Heanor branch.

An Interesting Closure

Swannington station, between Coalville and Burton on the Leicester-Burton line and closed to traffic on 16/6/51, was once the terminus of the Leicester and Swannington Rly., reputed to be the second passenger line opened in Britain. The Leicester terminus was at West Bridge (not London Rd.), close by the later G.C. station; when the later Leicester-Burton line joined the original railway at Desford Jcn., it demoted the Desford-West Bridge section to the status of a single line branch, closed to passenger traffic in 1926. Recent freight traffic has seen no larger motive power than "2F" 0-6-0s over this section, but on 23/6/51 a private excursion left Glenfield for Desford and Leicester hauled by "5MT" 4-6-0 No. 45263, assisted in rear over the branch by 0-6-0 No. 44160. The Leicester and Swannington Rly. claims three other distinctions, for Glenfield tunnel was the first (possibly *the* first) in Britain; one of its engines boasted the first locomotive whistle heard in Britain—an organ pipe adapted by a local instrument maker following an inadvertent fatality to a cow; finally, the first British coupled 0-6-0 ran on L.S.R. metals. [H. A. Gamble, D. Smith.]

Other branch lines recently closed to passenger traffic include those from St. Helens (Shaw St.) to Rainford Jcn. and Widnes, on which are those delightfully named stations, Rookery and Crank; the Scottish Region Alyth branch, north-west of Dundee, and the W.R. Malmesbury branch. The Ventnor West branch in the Isle of Wight is threatened with early closure, but, on the other hand, the ex-G.C.R. Barnsley-Sheffield (Vic.) line via Stairfoot has been reprieved for six months following a threat of closure on 18/6/51. In the summer timetables, moreover, a service reappears between Clapham Jcn. and Kensington (Olympia). [P. Norris, J. R. F. Melluish, H. Joyner.]

Cutting Trans-European Times

In the last issue we made brief reference to the improvements in Continental train services which have been effected this year. Some of them have been quite remarkable in the extent of the cuts in time that have been made. The Paris-Rome express, for example, has been accelerated 2¼ hr. each way, the journey having been cut to 20 hr. 25 min. southbound and 20 hr. 57 min. northbound. The "Simplon-Orient" Express, although diverted once again to serve Trieste, gains 2¼ hr. from Paris to Istanbul and 4¼ hr. on the westbound trip. We have referred already to the reappearance of the famous "Rheingold Express," with through coaches from the Hook of Holland to Basle, and from Amsterdam to both Lucerne (and Erstfeld), and Zurich (and Chur); although the passenger needs a transit visa through Germany, this once again affords a most attractive route to Switzerlnd, with a comfortable night on the boat from Parkeston Quay, and an arrival in most parts of Switzerland in the late evening of the following day. Another new express passing through Germany and Switzerland is the "Holland-Scandinavia-Italy" Express, with through coaches between both Copenhagen and the Hook of Holland and Rome, also between Berlin and Rome and Amsterdam and Genoa; this has reduced the Copenhagen-Rome journey time by 6¾ hr. to 38¼ hr. Another new train is the "Tauern Express," running from Ostend by way of Brussels, Cologne, Munich, Salzburg and the Tauern Tunnel to Klagenfurt and Ljubljana, where a through portion from Ostend to Belgrade is transferred to the Simplon-Orient Express. This connects and exchanges through coaches with the Holland-Scandinavia Express at Cologne and the Brenner line at Munich (to which a section for Merano is handed over). Incidentally, Spanish fruit wagons now reach London via the Dunkerque-Dover ferry. As the Spanish gauge is 5 ft. 6 in., wheels and axles are changed under special hoists at the Franco-Spanish border.

News in Brief

Mechanical coaling and ash removing plants are to be installed at Leicester (15C) depot, where the layout will also be improved.

A novel excursion, known as the "Radio Train," is run by the C.I.E. to different tourist centres in Eire. The coaches are linked by a public address system so that a guide can describe the outward journey; on the return trip passengers are invited to entertain fellow travellers with amateur turns. The "Enterprise" resumed through running to Cork on 18/6/51.

Annual "Open Day" at Eastleigh Works, S.R., for the benefit of the S.R. Orphanage, will be August 15th next.

With the retirement of Mr. H. A. Ivatt, the office of Chief Mechanical Engineer lapses on

British Railways. The title was first created for J. A. F. Aspinall by the L. & Y.R. in 1886.

First stage of the Manchester-Sheffield electrification, from Wath to Dunford Bridge, is now expected to come into operation early in 1952.

Voltage given for the Bury-Holcombe Brook line in our last issue should have been 1,300 d.c. Several readers write that "5MT" 4-6-0s Nos. 45020 and 45429, headed the up Royal Train pictured on page 200 (*June issue*).

LETTERS TO THE EDITOR

HIGH PRESSURE

To the Editor of "Trains Illustrated."

SIR,—I was pleased to read Mr. Ferry's letter in the July issue as it invites me to emphasise a point that seems to be very easily missed. In my 1934 proposal for a 4-8-0, the boiler pressure of 280 lb. per sq. in. was the *lowest* that would give the desired tractive effort with the *largest* driving wheels and the *largest* cylinder volume that were practicable in the layout adopted. This is the logical way of selecting boiler pressure, and it was this, and not any fancied advantage in high pressure itself, that compelled Chapelon (for example) to go up to 290 lb. per sq. in. in his Paris-Orleans 4-8-0 of 1932. Some locomotives, however, have been designed to work at higher pressures than this consideration demands; their designers have voluntarily adopted a course that is not justifiable with superheated steam unless there is no alternative.

Mr. G. H. Hunt believes (*June issue*) that the general physical laws do not apply in locomotive cylinders. On this revealing note the correspondence, I suggest, may be allowed to end. [*Agreed*, —ED.]. I personally should be grateful for information about any direct test that appeared to show an advantage from high pressure as against low pressure in two locomotives doing similar work at equal expansion ratios. This request has been made elsewhere on several occasions, but without response. Vague references to "modern developments" are valueless in this connection; facts, not theories or assumptions, are wanted.

Sheffield, 10. W. A. TUPLIN.

SMART RUNNING IN SUBURBIA

To the Editor of "Trains Illustrated."

SIR,—The letter of my good friend Mr. H. C. Casserley, printed in your July issue, left me a little breathless. The 4.58 p.m. from Euston to Tring has an allowance in the working timetable of 6 min. for the 3.5 miles from Hemel Hempsted to Berkhamsted, start to stop. If, on the occasion so graphically described by Mr. Casserley, the arrival of the train at Berkhamsted was 3 min. early, and assuming it left Hemel Hempsted on time, the 3.5 miles were covered in 3 min., at an average start to stop speed of 70.0 m.p.h. Allowing for getting up speed and slowing down again, there must have been an acceleration in 2½ miles or so to at least 100 m.p.h. up the 1 in 335! This must indeed have been "an extremely spirited effort"!

Hatch End, Middlesex. CECIL J. ALLEN.

THE STANDARD LOCOMOTIVES

To the Editor of "Trains Illustrated."

SIR,—In answer to Mr. R. S. Murphy, I cannot see how the outside transmission rod to the regulator on the new "7MT" Pacific is an improvement from the maintenance point of view, because the regulator itself is still inside the smokebox. Furthermore, it is more complicated and bulky than the slide-valve regulator, which is just as effective in regulating the steam, despite its simplicity. I have yet to hear of any trouble with the inside transmission rod on a W.R. locomotive. The outside transmission rod on the new Pacific is unprotected throughout its length and may be subjected to bending by cleaners using it as a step to get on top of the boiler. Had the designers not been biased so much to L.M.S. and L.N.E. practice, they would have found that the standard W.R. smokebox regulator and transmission would have filled all requirements; I know—I have opened and closed them often enough.

Finally, I would point out that the volume of exhaust steam from a cylinder depends on its diameter and stroke, and the position of the regulator and cut-off, but definitely not on the wheel diameter. I cannot see why No. 70000 was not fitted with a double chimney and blast pipe, which might have improved its efficiency by reducing back pressure in the cylinders.

Birmingham, 11. K. D. TURVEY.

THE MIDLAND LINE TO CAMBRIA

To the Editor of "Trains Illustrated."

SIR,—Mr. Bailey's interesting article (*June issue*) omitted to mention that after the grouping, and shortly before the advent of the 0-6-2s, Webb 2-4-2 passenger tanks were used on the Hereford-Brecon line. In Midland days, too, there was a through goods from Derby to Moorfields often hauled by Kirtley Class "I" No. 2414 or 2628 from Worcester, which returned the following day, a working suspended shortly after 1923, though through goods trains ran from Worcester and Gloucester to Moorfields and Brecon to Swansea until about 1932. At the latter time closure was also applied to the two evening 6.40 and 9.40 trains westward from Moorfields, whose Hereford crews took over eastbound trains from Swansea somewhere west of Brecon, and the yard shunter No. 1953 was taken away.

Leicester. G. BISHOP.

THE LANCASHIRE & YORKSHIRE

To the Editor of "Trains Illustrated."

SIR,—Your picture (*May issue*) of L. & Y. Baltic tank No. 11112 revived memories of this class—the "Bucking Bronchos" we called them, for they were topheavy and rocked a great deal. No crews liked them. We had trouble with the two stationed at Accrington, for they stalled climbing up Baxenden Brow incline, and required banking when at the head of heavy trains.

Accrington. A. MOORE.

To the Editor of "Trains Illustrated."

SIR,—L. & Y. No. 834 was an 0-6-0 tender engine, and cannot be the 7 ft. 3 in. 4-4-0 illustrated on page 159 (*May issue*), which looks like one of the 1220-9 lot, two of which were rebuilt with Belpaire boilers. On page 176, referring to the withdrawal of the last Hughes saturated 0-8-0, you say that 30 were rebuilt from the smaller boiler engines, but actually there were three more, later rebuilt again with superheated boilers. As these three were rebuilt before the grouping, the L.M.S. renumbering scheme included the 30 engines only.

Newcastle, Staffs. E. MASON.

To the Editor of "Trains Illustrated."

SIR,—To date, no representative of the L. & Y.R. has been preserved. May we suggest that the 2-4-2 tank, which was the first new locomotive to be turned out of Horwich Works, be preserved and repainted in original livery, namely, B.R. No. 50621. The L. & Y.R. was the largest cross-country railway and the 2-4-2 type is surely the most famous of its engines, whilst Horwich is still in the forefront of locomotive manufacture and maintenance.

Bradford. J. B. HODGSON,
Hon. Sec., Lancashire & Yorkshire Rly. Society.

THE "KRUGERS."

To the Editor of "Trains Illustrated."

SIR,—A point about the G.W.R. "Krugers" your short June article did not mention was that the leading pair of coupled wheels was allowed a certain amount of side-play in the frames, so that the engine would ride more easily on curves. To permit this, the coupling rods were provided with vertical joints, just in front of the point of attachment to the middle pair of wheels, clearly visible in the picture.

Middlesbrough. P. W. B. SEMMENS.

Motive Power Miscellany

LONDON MIDLAND REGION

As reported last month, "7MT" Pacific No. 70005 has been undergoing dynamometer car trials on the Leeds-Carlisle road. From 4-8 and 11-15/6/51, the engine was scheduled to run test trains varying in weight from 9-17 bogies from Carlisle (Durran Hill Jcn.) to Skipton (North Jcn.) and back (the trial was cancelled on 6/6/51) on 112 min. (up) and 140 min. (down) schedules for the 86-mile run. As 17 is the heaviest load ever taken over Ais Gill summit unaided, it is to be hoped details of the results will be released ultimately. The engine was too long to be accommodated on Skipton turntable; with the dynamometer car and van containing the bags of coal, it was sent to turn on the triangle at Shipley. On arrival back at Skipton, sufficient bags of coal for the return journey were transferred from the van to the tender—where, incidentally, the men working during the trials were not weighing but unloading the 1 cwt. bags on to the shovelling plate as required. An interesting fitting added to the engine was a tank to collect the overflow from the exhaust injector, which was emptied by a valve operated from the cab. By 27/6/51, when it was observed at Liverpool Street on the "Norfolkman," No. 70005 had reached Stratford for regular service. Meanwhile, "B1" No. 61353, the engine previously engaged in tests on this route, returned, presumably to Rugby, piloting L.M. Pacific No. 46239 on the 8.20 a.m. from Carlisle to the south on 1/5/51. [C. Bendall, T. J. Harrison, A. Rimmer, C. J. Scott.]

In addition to No. 45705, a second "Jubilee," No. 45683, visited Scarborough at Whitsun, assisting "D49" No. 62764 with the 1.30 p.m. from York on 15/5/51 and returning with a 4.18 p.m. relief to Birmingham. Another novel visitor, on 10/6/51, was new standard "5MT" No. 73002 with an excursion; engines of this type, based on Derby, have already been seen at Bristol, Manchester (Central) and St. Pancras, and the latest two, Nos. 73003/4, are shedded at Leicester, whence they have been working the 7.28 a.m. to Peterborough and 8.33 a.m. to Birmingham. On 21/6/51 No. 73003 was seen piloting "Jubilee" No. 45650 to Leicester on the 11.45 a.m. express from St. Pancras. Interesting visitors to Leicester shed have been, on 20/6/51, ex-L. & Y. 0-4-0T No. 51217 (17A), and on 21/6/51, 2-6-0 No. 43117 (20A). Apart from a failure at Peterborough, the recent clearance trials of a "D16/2" over the Midland were satisfactory, so that no restrictions need be placed on the availability of the "D16," "J11" and "J39" locomotives due to be allocated to the ex-L.M. shed at Peterborough (35C). Another Eastern 2-8-0, No. 63718 (36C) was observed heading through Trowell, north of Trent, with a freight for Toton on 2/6/51; No. 63660 (also 36C) was noted on 5/6/51, and No. 90290 (36B) on 6/6/51. [B. Trotter, H. A. Gamble, D. Smith, P. Robinson, M J. Draper, A. B. Turner.]

The Swedish Lloyd boat train from Tilbury rolled into St. Pancras at 10.15 a.m. on 10/5/51 behind a surprising visitor—"Jubilee" No. 45589 (20A). Previously, the heaviest engines noted on this duty have been "4F" 0-6-0s, Fowler 2-6-0s and "J39" 0-6-0s. By comparison with other Tilbury boat trains, the Swedish Lloyd enjoys the services of a well-kept rake of modern L.M. stock in new livery. Another odd engine to be seen on a Tilbury boat train was 0-6-0 No. 44578 (16A), on 4/5/51; almost invariably Cricklewood or Kentish Town engines are used normally. On 3/6/51, "L1" 2-6-4 tank No. 67730 was seen at Grays, heading an empty corridor stock train in the direction of Tilbury—the first time an "L1" has been seen on the ex-L.T.S.R. [D. W. Castle, E. P. A. Osborne.]

On the night of 12 and 13/6/51, a freight broke in half at Southwaite, some seven miles south of Carlisle on the West Coast main line, and the subsequent derailment forced diversion of several expresses from Preston, through Blackburn to Hellifield and via the Midland route to Carlisle. A correspondent on the 9.43 a.m. from Liverpool the following morning enjoyed a good run over Ais Gill, in which the 76.8 miles from Hellifield to a signal stop outside Carlisle were covered in 90 minutes by Polmadie "Scot" No. 46121. Another interesting performance achieved as a result of a failure was by diesel-electric No. 10001 on the up "Royal Scot," 6/5/51, which pulled a 14-coach train *and* pushed its defective twin at high speed from Beattock to Carlisle after the latter had broken down between Motherwell and Carstairs. "5MT" 4-6-0 No. 44953 was attached to the front of the diesels at Carstairs for the ascent to Beattock, where it was detached. The diesels have once more been displaced from the "Royal Scot" and No. 10001 has worked the 5.5 p.m. Euston-Blackpool since 25/6/51. [C. D. Roscoe, *Railway Observer*.]

An unusual double-heading spectacle results from the regular use of the "Scot" from the 4.46 p.m. arrival at Liverpool Exchange from Glasgow as pilot to the 9.10 p.m. Liverpool-Blackpool, of which the train engine is either a "5MT" 4-6-0 or a 2-6-4 tank; Nos. 46107 and 42638 were noted in tandem on 7/6/51. When H.M. the Queen and H.R.H. Princess Margaret visited Belfast at the end of May, their trains were worked right through to the Riverside station by "6P" and "7P" engines; on 30/5/51 and 5/6/51 "Jubilee" No. 45672 also ran through to Riverside with troop specials. Although the swing bridge just outside Riverside station, in the dock area, has been strengthened to permit the use of heavier engines, in practice boat trains are still "rehorsed" by two Class "2MT" tanks at Edge Hill, as the Riverside turntable cannot accommodate a large locomotive, which, running tender first with the empty coaches back up the steep hill to Edge Hill, cannot use sand to counteract the usual slipping and stalling that takes place. [J. R. F. Melluish.]

News in Brief : "Scot" No. 46111 was noted in Rugby repair shop on 2/6/51 [P. Roulston] . . . . Two Trafford Park engines were noted recently at Huddersfield, No. 44236 on shed on 21/5/51 and No. 45553 on 1/6/51, the latter heading the 8.55 a.m. Hull-Liverpool (Lime St.) [J. K. Morton] . . . At the end of May ex-L. & Y. 2-4-2 tank No. 10897, believed to have been running tests on the Uttoxeter-Burton line, was seen to carry a 25C shedplate, although it does not figure any longer in L.M.R. stock

EASTERN & N.E. REGIONS

The dynamometer car trials on the ex-G.E. main line, briefly mentioned last month, comprised four return trips on the "East Anglian," two with nine coach loads (one with a Pacific, the other with a "B1"), and two with 12-coach loads by Pacifics, all on the new summer schedule. The "B1," we gather, did not perform too well, and the authorities are jealously guarding their Pacifics against possible depradations by other Regions. The Southern Pacifics seem to be unpopular with the G.E. crews, on grounds of heat in the cab and coal consumption, and with the authorities due to their lack of water pick-up apparatus, which necessitated a six-minute stop at Ipswich for water when No. 34065 worked the down "Norfolkman"; their most important turn on this route, therefore, has been nothing more striking than the adversely retimed nine-coach "Day Continental," which now crawls up behind an all-stations Ipswich-Shenfield train. Despite extensions, the Liverpool St turntable was still unable to accommodate the standard Pacifics, so that the Norwich engines, except where the roster provided time to turn at Stratford, have been seen on turns to Cambridge and March, such as the through train to York. Otherwise the new Pacifics seem to be more than coping with traffic. An observer at Witham reports that the "Norfolkman," "Hook Continental" and other Pacific-hauled

trains are regularly before time, and, as to speed, we have heard of an authenticated 92 m.p.h. at Diss. On 2/6/51 No. 70002 was seen at Beccles with the 1.5 p.m. Yarmouth-Liverpool Street, where a "K1," No. 62014 (31B), was noted for the first time on 9/6/51 with an excursion for Yarmouth; most of the express work on this line is performed by "B12s" and "D16s." On 16/6/51 the 2.15 p.m. to London left Norwich double-headed by Nos. 61600 and 70002. Another G.E. secondary line to be invaded by "B2s," "B17s" and "B12s" is the Sudbury branch; recently these types and "K2s" have appeared on the 6.46 p.m. Sudbury-Marks Tey. On 7/6/51, 2-8-0 No. 90224 took over the 3.30 p.m. Liverpool Street-Clacton from a failed "B12," No. 61557, at Shenfield; leaking brakes helped to keep speed down to 30 m.p.h., with the result that, after an hour late arrival at Thorpe, the 4.30 p.m. from Liverpool Street was put in front to reach Clacton first! [P. Lawson, M. Hunt, R. Mann, C. Bettridge, A. Waterfield, G. C. Close.]

On 9/6/51, "A1," No. 60132 failed at Doncaster with the down "Flying Scotsman," to be replaced by "B17/6" No. 61635, which took the train on to York, where it gave place to Pacific No. 60504. Another "B12" has visited Scarborough; No. 61554 was noted heading through Cottingham, north of Hull, with an excursion on 3/6/51. On 28/6/51, a "4MT" 2-6-0 paid a first visit to Whitby, when No. 43101, piloted from Malton by "A8" 4-6-2 tank No. 69890 and back to Malton by "G5" 0-4-4 tank No. 67330, ran through with a schools' excursion from Hull via Driffield [H. Townend.] A failure on 22/5/51 probably resulted in the appearance of "5MT" 4-6-0 No. 45261 (25A) beyond York on the 10.30 a.m. Liverpool (Ex.)-Newcastle, which runs via Stockton, W. Hartlepool and Sunderland—the first time a Stanier 4-6-0 has traversed this route? Two "5MT" 4-6-0s from Carlisle (Canal), Nos. 45096 and 45454, have also been working into Newcastle. Two "Patriots" have recently visited York, rebuilt No. 45531 with an excursion from Warrington on 3/5/51 and No. 45508 on 16/5/51. [P. S. Wells, "Atlantic," J. P. Heald, P. M. Nathan, R. Froggatt, J. McEwan, D. Thornber.]

At Doncaster, "J52" saddletank No. 8816, works shunter for some months past, has been repainted and returned to normal service at Grantham. The last Ivatt Atlantic, No. 62822, was cut up on 9/6/51. [B. G. Warnes, P. R. Emery.]

In the London area, an interesting visitor to Neasden on 30/5/51 was "D16" 4-4-0 No. 62522 with an oil tank train from Beckton. The same day there arrived Neasden's newly allocated "J50" 0-6-0 tank, No. 68949, which began work on the West Ruislip pick-up and Neasden-Marylebone goods yard workings. Latest worker on the Marylebone-S. Ruislip "push-and-pull" (no longer so when it or an "L1" is in use) is "J11" 0-6-0 No. 64438. During a mid-May week two York "B16s" were noted in the London area on freight trains, though these engines appear regularly at Marylebone on the 3.7 semi-fast arrival and 5.1 p.m. semi-fast departure. Most extraordinary power seen on the Welwyn Garden City-Hertford North branch, due to be closed on 18/6/51, was the former Liverpool & Manchester Rly. *Lion* and three coaches for use in filming a new production, "Lady of the Lamp," on 3 and 4/6/51; a Hatfield crew, suitably clad, were in charge—and hugely enjoying the affair. *Lion's* original wheels had to be replaced owing to the smallness of their flanges. [P. Carter, C. Bentley, M. Seaman, J. F. Aylard.]

News in Brief: The tally of "B1s" now deprived of nameplates seems to be five—Nos. 61005/10/7/35/8 [P. S. Wells] . . . . The Garratt, No. 69999, is back at work on the Worsborough bank, but is in bad condition; the order for a new boiler has been cancelled, and it is not expected to survive electrification of the bank, estimated to be completed in 6-9 months' time [P. W. B. Semmens] . . . . All "Q7" 0-8-0s are now to be fitted with two large Westinghouse pumps, for use with new 40-ton bogie iron ore wagons to be introduced between Tyne Dock and Consett; one pump will operate wagon air brakes, the other wagon doors, so that the iron ore can be unloaded on the move [*Railway Observer*] . . . . A recent visit to the Grimsby-Immingham Rly. disclosed an unfortunate state of affairs; all the cars in use were in very poor condition, three were out of service in the Great Coates shed with bogies removed and two more were alongside with cabs smashed. Only one car, No. 16, has been repainted and lettered "British Railways" [G. E. Jones] . . . . An interesting visitor to Leicester (G.N.) shed on 20/6/51 was the side-window "D3" 4-4-0 No. 62000 (35B), now the sole surviving G.N. 4-4-0, for "D2" No. 62172 is reported withdrawn on 19/6/51 [H. A. Gamble, W. Daykin] . . . . The first of a new batch of "2MT" 2-6-0s, No. 46465, has been allocated to Cambridge . . . . On 23/6/51 "A3" Pacific No. 60052 failed at Aylesbury with the 3.20 p.m. Marylebone-Manchester, and was replaced by "J11" 0-6-0 No. 64438. On the same day, "B17/1" No. 61619 (31A) was noted at Loughborough heading a semi-fast towards Leicester; presumably it was running in after "shopping" at Gorton [R. Mann, E. A. Thwaite] . . . . No. 69789 is the first "A7" 4-6-2 tank to be withdrawn.

WESTERN REGION

Recent events in the London area have been of interest. We omitted to remark last month that a "45XX" 2-6-2 tank, No. 4539, has been allocated to Reading; No. 4525 of the same class, but shedded at Penzance, was seen heading a Brentford-Reading goods on the evening of 18/6/51. On 16/6/51, the up "Torbay Express" passed through Reading, where the engine stopped for water—and restarted 13 bogies without a slip, behind 0-6-0 No. 2222, which took over from a failure at Newbury; the train was over an hour late. (Incidentally, all W.R. titled trains are now carrying the L.N.E.R.-type smokebox headboards.) On 18/6/51 the 6.55 p.m. Paddington-Swansea was noted 45 minutes behind time at Maidenhead behind 2-8-0 No. 3844 (86E). Another eight-coupled tank, No. 5220 (87B) was at Old Oak on 8/6/51, and on 23/6/51 0-6-0 No. 2537 (86C) was seen there. There have also been two novel visitors to Windsor Central, "B1" 4-6-0 No. 61077 with an excursion from Wembley via Ruislip on 16/6/51, and "5MT" 4-6-0 No. 45399—of Edge Hill!—on 24/6/51 with an excursion from Leicester and Hinckley, which later made a trip down the single-line branch to Marlow. On 9/6/51, 4-4-0 No. 9008 was working empty stock into Paddington, and on 5/7/51 No. 9018 appeared with a parcels train. [G. Leake, P. Hodge, N. Harrison C. W. L. Wilson, M. Lethwidge, M. Taylor, J. Bourne.]

In our June issue we erred in stating that "Manor" 4-6-0s Nos. 7815/8 operate on Reading-Southampton trains; our correspondent meant evidently the Cheltenham-Southampton route, over which these two, in company with No. 7824, are seen frequently on the 10.5 a.m. from Cheltenham and the 5.36 p.m return working from Andover, which is believed to be the terminal point of the "Manor's" roster. Occasionally the "Manors" are seen on freight duties [R. Earle.]

On 8/6/51, "King" No. 6021 failed at Exeter on the 3.30 p.m. from Paddington and 2-6-2 tank No. 5157, the engine rostered to the semi-fast Paignton portion, was switched to the six-coach Plymouth section. No. 5157 was not replaced at Newton Abbot, but took the express on over the Devon banks unaided, for it was observed passing Totnes at 7.50 p.m. No. 6021 spent two days on Exeter shed before re-entering service on the 4.15 p.m. stopping train to Paignton. A few days earlier, on 30/5/51, the 5.30 p.m. from Paddington surprisingly appeared at Exeter behind "Saint" No. 2954 (82C). [A. R. Bailey, M. Revell.]

News in Brief: Gas Turbine No. 18000 was out of service in Swindon works on 3/6/51 and is believed to have suffered a major internal failure [E. W. Field] . . . . W.D. 2-8-0s from the ex-G.C are frequent visitors to S. Wales. On

9/6/51, Nos. 90484 (of Colwick) and 90520 (Woodford) were noted at Newport (Mon.), and Nos. 90448 (Colwick) and 90137 (Woodford) were seen at Ebbw Junction shed on 16/6/51 [H. D. Edmunds] . . . . New "4MT" 4-6-0s Nos. 75001/2 are allocated to Weymouth and Banbury respectively, but Pacific No. 70015, destined for the W.R., is on loan to Camden, L.M.R., and No. 70016 is working the "Thames-Clyde" express from Leeds (20A). [J. Bourne, A. W. Wilson.]

SOUTHERN REGION

What is believed to be the first visit of a W.R. "Castle" to Bournemouth took place on 3/6/51, when 4-6-0 No. 4082 worked right through from Worcester with an excursion. Earlier, on 23/5/51, a "Schools" once more returned to the Bournemouth line, when 4-4-0 No. 30920 appeared with a Winchester College special train. The second "7MT" Pacific No. 70014 has arrived at Nine Elms and was working Bournemouth trains, but after repairs at Brighton works, it was due to take up work on Eastern Section boat trains from 23/7/51; No. 70009 headed the 1.20 p.m. Euston-Holyhead on 24/6/51. [G. O. P. Pearce, J. E. Studd, R. Haynes.

To date, the most regular "West Country" performer on the S. & D.J. has been No. 34037, which works the 6.55 a.m. from Bath and the 3.35 p.m. from Bournemouth; Nos. 34042/3 have made occasional trips. Nos. 34040-2 were re-allocated to Bournemouth on 27/6/51. On 12/6/51, "T9" No. 30710 began to work the Brighton-Bournemouth through train, but Atlantic No. 32421 put in an appearance on 13/6/51. [T. Pritchard, T. M. Abbott.]

On 2/6/51, in connection with the International Union of Railways Congress, an exhibition of modern rolling stock was installed in Eastbourne goods yard. In addition to the locomotives pictured on the cover and page 254, S.R. electric engine No. 20003 and diesel shunter No. 15227 were on view, with new standard coaches and civil engineering exhibits. On 3/6/51 electric locomotive No. 20001 conveyed the delegates in a special train of 12 L.M. corridors via Streatham, where it ran round the train, Wimbledon, Weybridge and Virginia Water West curve to Reading New Junction; at the last-mentioned point W.R. 4-6-0 No. 4085 took over the train for the final run to Bath. A similar return journey was made the same evening. It had been intended to organise a Pullman train for the trip, but this was cancelled as there was some diffidence about W.R. staff reactions to Pullman working over their territory. [A. T. H. Tayler.]

To judge by chalked inscriptions, polite and impolite, embellishing the last "T14" 4-6-0, No. 30461, when observed at Nine Elms on 17/6/51, she was not long for this world, and as we go to press we learn she was officially withdrawn on 2/6/51; it is believed that a "last run" excursion from Waterloo to Eastleigh is planned for her. All the remaining "B4" 4-4-0s, "T1" 0-4-4 tanks, and the two ex-L.B.S.C. 4-6-2 tanks have been withdrawn, while one "11X" 4-4-2 tank only, No. 32002, remains.

News in Brief: First principal express engine in the U.K. to be painted green instead of blue, under the new system, appears to be "Merchant Navy" No. 35024. The mechanical stoker has been removed from No. 35005 [T. M. Abbott] . . . On Derby day, 30/5/51, two specials were run from Victoria, one an all-Pullman train headed by electric locomotive No. 20001, the other a corridor train with Pullman car double-headed, over the steep gradients between Sutton and Epsom Downs, by 2-6-4 tanks Nos. 42084/97 working bunker to bunker. An all-Pullman special from Cannon Street was headed by 2-6-0 No. 31879 [H M. Madgwick, R. C. Riley] . . . . At Eastleigh the last of the "Jubilee" 0-4-2s, No. 612, withdrawn in 1941, is still intact as a stationary boiler; it has recently been renumbered DS3191 [*Railway Observer*] . . . . The first of the new standard 2-6-4 tanks, No. 80010, emerged from Brighton works at the end of June. Brighton shed regained four Pacifics on 27/6/51, when Nos. 34045-8 were re-allocated there.

SCOTTISH REGION

Following last month's notes on the two "V4" 2-6-2s comes news that No. 61700 was observed on 4/6/51 at the head of the 10.30 a.m. Newcastle-Carlisle buffet car train. Some Dundee and other Scottish "V2s" have also been seen recently at Carlisle with special cattle trains together with "B1s" on special passenger workings over the ex-L.M.S. main line. "A1" No. 60160 *Auld Reekie* was found at Polmadie shed on 17/6/51, while "A4" No. 60012 was at Ayr on 29/5/51 for a railway exhibition. An unidentified "A1" noted with a Glasgow (Central)-Edinburgh (Princes Street) train on 12/6/51 was seen to be carrying a Caledonian-type miniature semaphore route indicator; these indicators are still in extensive use on trains from Glasgow (Central) and on ex-G.S.W. trains from Glasgow (St. Enoch). [A. M. Wood, G. Ewing, *Railway Observer*.]

On 19/6/51 "A2/3" Pacific No. 60515 failed, approaching Edinburgh Waverley with the down "Queen of Scots," and had to be helped into the station by "J83" 0-6-0 tank, No. 68477. On 16/6/51 a 15-coach troop train was double-headed out of Perth by a "5MT" 4-6-0 and "D11" 4-4-0 No. 62685, while on 23/6/51 "J37" 0-6-0 No. 64620 and Fowler 2-6-0 No. 42746 were noted in tandem on an empty stock train at Alyth Junction. [H. H. Webster.]

News in Brief: The three ex-L.M.S. Leyland diesel railcars, Nos. 29950-2, which worked from Hamilton, have been broken up after over a year's inactivity at St. Rollox works. The St. Rollox 0-4-0 saddle tank, No. 56025, still maintained, fully lined out, in impeccable condition, rejoices in the nickname of "Wee Toots" [G. Ewing] . . . . A correspondent recently enjoyed an outstanding run on the "West Coast Postal" from Forfar to Perth, when Pacific No. 46235 covered the 32.5 miles in 30 min. net, reaching 87½ m.p.h. at the Tay Viaduct, footing the 1 in 160 stretch downhill from Cargill; did not fall below 75 m.p.h. at Stanley Junction, despite the climb at 1 in 140 for a mile beyond Tay Viaduct; and then regained 84 m.p.h. on the descent to Luncarty. [H. H. Webster.]

LOCOMOTIVE STOCK CHANGES

IN all cases B.R. numbers of locomotives are employed. NYA denotes "Not yet allocated." The lists are correct to the following dates: E. & N.E.R. to 23/6/51; S.R. to 27/6/51; Sc.R. and W.R. to 19/5/51; L.M.R. to 16/6/51.

NEW ENGINES.

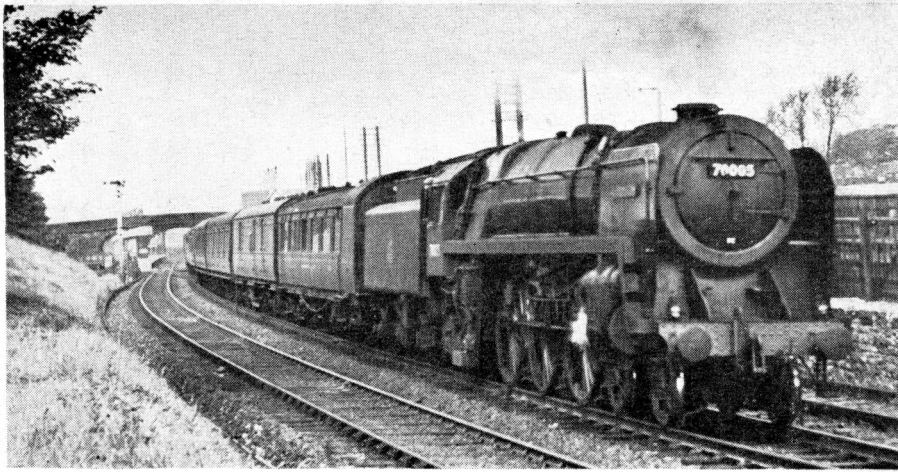
"1600" 0-6-0PT: 1646-87D; 1647/8-82C; 1649-NYA; **"9400" Class 0-6-0T:** 8470-88C; 8471-NYA; 9446-87A; 9447/8-NYA; **D.E. 0-6-0:** 12088/9-3D; **Class "EMI" Electric:** 26011/3/4-39A; **Class "4MT" 2-6-4T:** 42092/3-75A; 42094-74B, 42095-75F; **Class "4MT" 2-6-0:** 43108/9/10-31D; 43116/7-20A; **Class "5MT" 4-6-0:** 44687-9A; 73003/4-15C; **Class "2MT" 2-6-0:** 46465-31A; **Class "B1" 4-6-0:** 61378/9-38A; **Class "7MT" 4-6-2:** 70012 *John of Gaunt*, 70013 *Oliver Cromwell*-32A; 70014 *Iron Duke*-70A; 70015 *Apollo*-1B; **Class "4MT" 4-6-0:** 75000-82C.

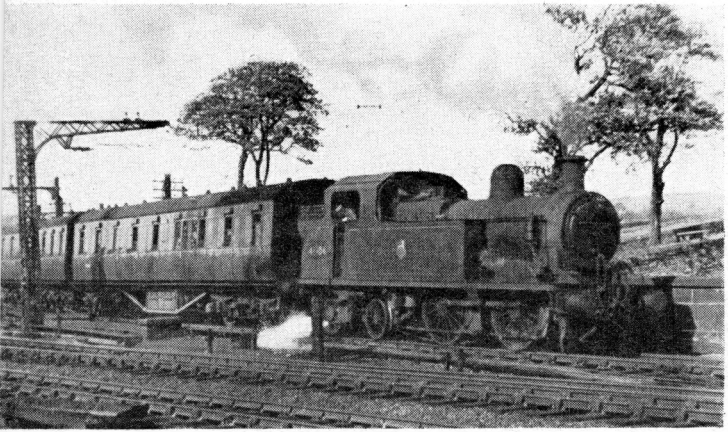
ENGINES CONDEMNED.

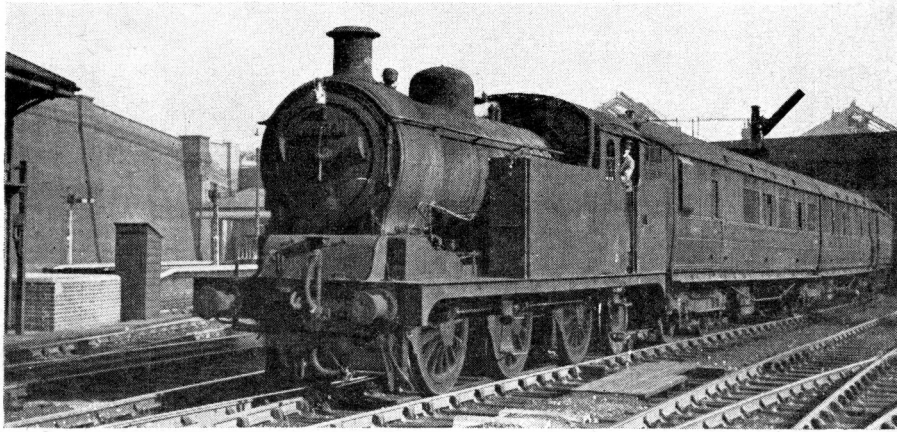
278, 2063/98, 2104, 5303/46, 30007/20, 30367/84, 30406/9/16/8/61, 30723, 31044/66/92, 31248, 31391/5, 31432, 31705/10/31, 32005/8/54/63/8/82/3, 32129/45, 32325/6, 32574/95/6, 32602, 40729/47, 41690, 47884, 49006/14/31/62; 49296, 49502/71/87/9/93, 49617/50, 52059, 52126, 52296, 52460, 52945, 54638, 58063, 58285, 68163, 62391, 63223/7/36/40/67/84, 64123, 65076 65426, 65614/53/72/9, 65718, 68163, 68221, 68377/85, 68433, 69789. **Railcars:** 22950/1/2.

ENGINES REALLOCATED.

35, 63-88B; 349-86C; 1003-84G; 1205-86C; 1641-87D; 1642-85B; 1643-87C; 1644/5-87A; 1996-85B; 2034-85A; 2043-85C; 2223-87J; 2283-87H; 2579-81F; 2805/63/83-86B; 2809/39/44/59/73-86E; 2843-83D; 2869-83A; 3015-87A; 3658-84A; 3746-82C; 3748-82B; 3832/49-86E; 3842-86C; 3865, 4034-82C; 4151-86E; 4133, 4403-83D; 4544-82A;







NEWSREEL II — *Top left* : Titled Tank—W.R. "5101" Class 2-6-2T No. 5163 sets off from Stratford-on-Avon with that town's portion of the up "William Shakespeare" (10/5/51). *Top right* : Class "7MT" 4-6-2 No. 70005 *John Milton* passing Long Preston (12/6/51) on one of its recent test runs over the Carlisle-Leeds route (see page 284). The exhaust injector tank can be seen clearly under the cab. *Bottom left* : Stanier 0-4-4T No. 41904 entering Lancaster (Castle) from Lancaster (Green Ayre) with one of the auto trains that has replaced the electric service. *Bottom right* : "N7" at Nottingham—one of Colwick's new 0-6-2T arrivals, No. 69613, leaves Victoria station with the 6.5 p.m. to Derby (8/6/51).

[T. E. Williams, C. W. Bendall, N. Dyckhoff, J. P. Wilson

4551-82D; 4586-85B; 4590-83D; 4596-85D; 4605-84A; 4630-88D; 4641-85C; 4900-83A; 4909/69-82C; 4917-82B; 4970-83B; 5076-81A; 5151-84A; 5315-84J; 5350-82B; 5395-89C; 5408-87G; 5411-83B; 5417-85B; 5508-82F; 5509/36/40-82C; 5518-85D; 5558-83B; 5633-86C; 5638-86J; 5761-87H; 5921-86B; 5923-86E; 5929-87E; 5960-82B; 6129/66-W.R.; 6345-82B; 6334-85A; 6355-87D; 6600/2-86C; 6624-84G; 6634/53-86G; 6664-88A; 6683-84K; 6835-84D; 6926-86E; 6932-86B; 6951-85B; 6985-85C; 7216-86C; 7236/40-83A; 7400-87G; 7418-82F; 7439-87K; 7748-86B; 7915-84B; 7922-84K; 8420/4-88A; 8464-88B; 8785-87F; 9315, 9401/2/4/5-81D; 9406-81B; 9410/1/2/4/20-81A; 9443-87F; 9444-87B; 9445-85B; 9647-83B; 9771-82B; 30028-70C; 30040-72A; 30048-75D; 30051-71D; 30055/6/60, 30105-71B; 30357-72A; 30379-71A; 30415-71D; 30456/7-70A; 30481-71A; 30571, 30744-70B; 30767/8/9/77/8/9-73A; 30781-70A; 30782/3-71B; 30796/7/8-74C; 30823/4/5/46/7-72B; 31047-74C(F); 31063-73C; 31150-74C; 31162, 31253/5/6-73E; 31291-73B; 31305-73E; 31317-74C; 31339-74A; 31481-73E; 31586-73D; 31634-70D; 31635-71B; 31636-72B; 31687/8-73C; 31758/9-73A; 31828/9/72/3/90/1/2/3-73B; 31874/5-73C; 31896-75A; 31901/2/3/4-73A; 32021-75E; 32023-75A; 32147-73B; 32160-71D; 32168-75A; 32506-72B; 32549/50-71D; 32581/5-75F; 33016-71D; 34040/1/2-71B; 34045/6/7/8-75A; 34050/1/2/3-72B; 34061/2-72A; 34100-74B; 40324-6A; 40326-23B; 40444-20A; 40676-26A; 40937-27C; 41023-17A; 41059-15C; 41100/1/2/3-35C; 41104-28A; 41186-27D; 41189/91-27A; 41193-28A; 42061-9G; 42063-5D; 42247-5E; 42677-5A; 43107-31D; 43193-15B; 43301-20E; 43856-15A; 43868-68B; 43862, 44112-21A; 44118-18B; 44241-20B; 44570-23A; 44677-65B; 44697-24A; 44703-68A; 44778-28A; 44892-12B; 44971-3A; 45061-28A; 45069-2A; 45096-10B; 45141-12B; 45334-28A; 45396-26A; 45454-10A; 45509-5A; 45553-9A; 45570, 45626-17A; 45602-22A; 45639-16A; 45655-9E; 46428-10F; 48053-20C; 48074-1A; 48083-19C; 48159, 48203-20A; 48250-3A; 48323-8D; 48391-19C; 48401-20A; 48544-4A; 48547, 48609-20A; 48708/56/8-12B; 49020-3C; 49536, 49608-26F; 50647/55-26D; 50651-27B; 50652-24B; 50715-25A; 50757-26A; 50829-27B; 50892-25E; 52143-10C; 52289-27D; 52615-27B; 55239-66B; 56029-65D; 56030-65B; 44703-68A; 55239-66B; 56029-65D; 56030-B. & W., Renfrew; 57622/5-66A; 57563-68A; 60814-Sc.R.; 60815-36A; 60821-64A; 60890-38E; 61047-40A; 61089-40B; 61367/8-38E; 61514/42-32E; 61545-32F; 61559/67-30E; 61621/58-31B; 61650/64-30A; 61660/72-30A; 61736/9-40B; 61721/34/69-Sc.R.; 61839, 61956-40B; 62049/50-51A; 62372/3-51J; 62355/75/83/96-52D(A); 62388-51C; 62389/92-50C; 62565/72-31A; 62598, 62608-32A; 62617-32G; 63601/49, 63832-40B; 63837-40E; 63839/77-38A; 64116/9-35A; 64214/72/7-40F; 64245/52-36E; 64214/72/7-40F; 64306-39A; 64394, 64408-39B; 64413-39A; 64547-64C; 64649-31B; 64699-34B; 64781-30F; 64720/57/63/87, 64837-37A; 64867-50F; 64981-37A; 64941-54C; 65311-64C; 65390-31A; 65444-30E; 65476-30A; 65507/58-32C; 65514-32A; 65654-51E; 65705-54C; 65712-51A; 67232-32C; 67242-51F; 67291, 67333-51J; 67316-51C; 67324-51F; 67331/44-51A; 67345-51E; 67710-32A; 67727/39-30A. 67758-34E; 68021-52B; 68059-52C; 68041/58-54A; 68071-9E; 68098-NCB, Carberry; 68118/24-65A; 68265-52B; 68267/73-52C; 68388-32G; 68406-50C; 68436-50B; 68702-52B; 68949-34E; 69312/24-39B; 69780-53C; 69824-40A; 69830/2/8/40-51A; 69837-32A; 70009-70A; 90108-36A; 90133-36C; 90127/42, 90234-27B; 90245-26A; 90254-26B; 90270-36A; 90280/96-31B; 90301/83-36A; 90312-84C; 90390, 90408-27B; 90448/84-38E; 90456-36C; 90485-50A, 90524-85A; 90538/82-36A; 90570-27B; 90574-38E; 90579-84C; 90604/87-27B; 90621-25E; 90634-38A. **Addendum:** 1964-6C.

READING FOR RAILFANS

ON RAILWAYS AT HOME AND ABROAD, by P. Ransome-Wallis. *Batchworth Press*, **15s.**

To see the world from its varied footplates is obviously detrimental to many cherished concepts, and when this author starts calling Canadian and (above all) American engines "graceful," "little," "lovely," etc., we can at least be sure of a lively mental disturbance. This may be good for some little looseness in our sense of proportion; too many of our engines are beautiful to all except the doughty old sweats who have to make them go, and perhaps Emancipation begins with *Britannia*, whose skirts are ever so demurely shortened. The principal virtue of this work is that the author describes the various engines from the angle of what they daily do, and in this light some of the most unprepossessing machines acquire the fundamental beauty of absolute fitness for their job. The author's footplate experiences penetrate into places and countries where apparently no recorder ever previously set foot, and since all his impressions are recorded with the trim detail of a practised observer, I am steadily but imperceptibly persuaded to the belief that locomotive practice and performance overseas is greatly more developed than over here. The author may object to this interpretation, but his own illustrations go to prove remarkably high standards of maintenance, and his own script underlines the extent to which every conceivable gadget is pressed into use with this aim in view. This skilful and irresistible build-up of a case finally prompts some extremely pungent questioning, and this financially anaemic British taxpayer would like to know, *inter alia*, why his latest, greatest and altogether not unhandsome "Pacific" engine should have suffered teething troubles when the world's biggest and, probably, ugliest locomotives went straight into harness, without even a spot of "running-in." In short, this is a major work on railways, which would adorn any publisher's lists, and any reader's shelves.

THE LOCOMOTIVES OF THE G.W.R., Part 1 Preliminary Survey. *Rly. Correspndce. & Travel Scy., 18 Holland Ave., Cheam.* **10s.**

Again the indefatigable researchers of the R.C.T.S. are at work, this time on an infinitely painstaking survey of the motive power of the G.W.R., and its constituent companies. Groping through the welter of figures and initials one cannot exactly review the results as literature, but merely express reverential awe and gratitude for the labour of love that goes into a work of this kind. This preliminary survey, a concise basic history in itself, traces and lists by lot, works and engine numbers all G.W. locomotives from earliest standard gauge days up to the present, adds chapters on liveries, engine diagrams, boiler types, fittings, classification and A.T.C., and tops off the lot with pages of fascinating illustrations and an excellent colour plate. Further parts, completing the most authoritative G.W.R. locomotive reference work conceivable, will deal in historic and dimensional detail with individual classes.

THE ABC OF BRITISH RAILWAYS LOCOMOTIVES. Parts 1 to 4. *Ian Allan, Ltd.*, **2s. each.**

Very few months seem to have passed since we reviewed the last edition of this standard item of the railfan's equipment—such is the insatiable demand for ABCs. In response, we gather, to the overwhelming weight of opinion, shed allocations are now omitted, though a separate shed book covering all Regions for 2s. 6d. complete will be continued, and the ABCs revert to their original and far more attractive style. On the other hand, we note with regret that this change has not restored the previous peak total of 24 illustrative pages in each book. The rising costs of production presumably are to blame. Rather than sacrifice the useful variety of illustrations, the majority of ABC-users, we feel, would prefer to pay an extra sixpence per ABC for a higher quota of those useful pictorial guides.

SMALL ADVERTISEMENTS

WELSHPOOL-LLANFAIR LIGHT RAILWAY, Illustrated History 3/6. Also available : Corris, 4/3 ; Vale of Rheidol, 4/3 ; Rail Speed Pocket Chart, 9d. ; Talyllyn Pre-1948 Tickets, 8d. each. All post free. Lewis Cozens, 25 Cholmeley Crescent, Highgate, London, N.6.

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SPOTTINGS & JOTTINGS

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ADDRESS———————

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———————

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Number	*Shed*	*Point Seen*	*Time*	*Date*

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For Ian Allan LOCOSPOTTERS . . .

Our DERBY DAY will be AUGUST 21st !

Yes! DERBY WORKS will be open for Club Members travelling from:

- **BIRMINGHAM**
- **MANCHESTER**
- **LEEDS**
- **BRISTOL, etc.**

and . . . .

arrangements from other centres may be possible if parties can be made up. See below for instructions

LONDON MEMBERS!

If you haven't booked a seat for Southampton Docks, August 2nd, you might still just make it! CONTACT H.Q. AT ONCE. Under 16's, 12/6; Over 16's, 18/6.

Apply for Tickets at once

if you want to start from:

BIRMINGHAM		MANCHESTER	
Fare under 16	Fare over 16	Fare under 16	Fare over 16
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Travelling times and other details will be sent with your ticket. All are welcome — bring your friends and families!

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Please send me ..... Juvenile
..... Adult
} tickets for the DERBY Trip,

starting from BIRMINGHAM / MANCHESTER

for which I enclose Postal Order / Cheque value £ : s. d.

(Cheques should be crossed and made payable to "Ian Allan Locospotters Club Ltd.")

NAME .....

ADDRESS .....

.....

Please enclose STAMPED ADDRESSED ENVELOPE for Ticket.

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- **MANCHESTER**
- **LEEDS**
- **BRISTOL, etc.**

and . . . .

arrangements from other centres may be possible if parties can be made up. See below for instructions

LONDON MEMBERS!
If you haven't booked a seat for Southampton Docks, August 2nd, you might still just make it! CONTACT H.Q. AT ONCE. Under 16's, 12/6; Over 16's, 18/6.

Apply for Tickets at once

if you want to start from:

BIRMINGHAM		MANCHESTER	
Fare under 16	Fare over 16	Fare under 16	Fare over 16
6/-	10/6	8/-	14/6

Travelling times and other details will be sent with your ticket. All are welcome — bring your friends and families !

OTHER CENTRES: If you want to start from other centres, write NOW to Headquarters, saying where you want to start and enclosing STAMPED ADDRESSED ENVELOPE. Details of facilities will be sent to you if they can be arranged, or you will be informed to the contrary.

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Application Form for Tickets from Birmingham & Manchester only

To: Ian Allan LOCOSPOTTERS CLUB, 282 Vauxhall Bridge Rd., London, S.W.1

Please send me ..... Juvenile } tickets for the DERBY Trip,
..... Adult }
starting from BIRMINGHAM / MANCHESTER

for which I enclose Postal Order / Cheque value £ : s. d.

(Cheques should be crossed and made payable to "Ian Allan Locospotters Club Ltd.")

NAME .....

ADDRESS .....

.....

Please enclose STAMPED ADDRESSED ENVELOPE for Ticket.

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